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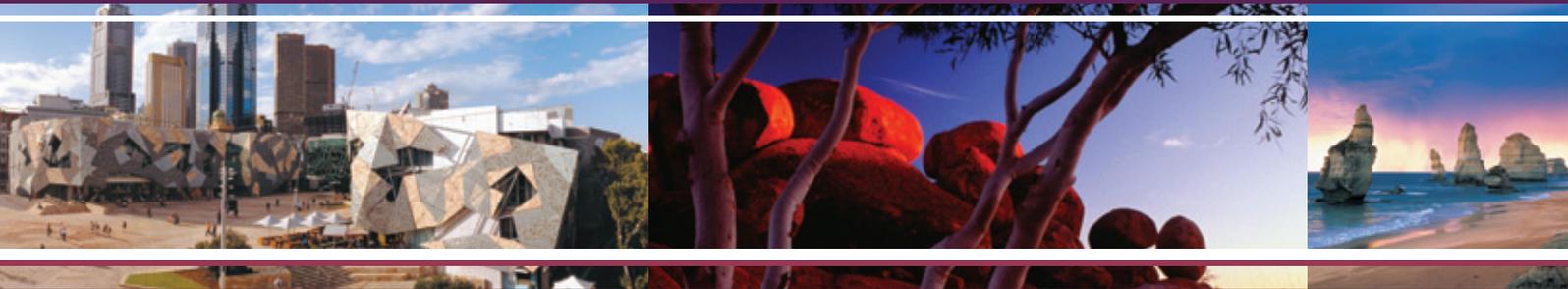


Congress Hosts



27th International Congress of Applied Psychology Ψ

11-16 July 2010 Melbourne Australia



Abstracts of the 27th International Congress of Applied Psychology

Editors: Vicky Mrowinski, Michael Kyrios and Nicholas Voudouris

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Forward from the Editors

It is with great pleasure that we present the *Abstracts of the 27th International Congress of Applied Psychology*. These abstracts represent the great breadth of topics covered by the presentations at the Congress, including over 100 State of the Art and other invited keynote addresses, over 200 symposia, almost 600 individual oral presentations, over 600 brief oral presentations, and over 550 electronic posters, bringing together more than 2000 presenters from 60 countries - a truly international event. The range and depth of the research reflected in these abstracts attests to the vibrant international applied psychology community across the world.

The 27th International Congress of Applied Psychology incorporated the 45th Annual Australian Psychological Society Conference, and on behalf of the Scientific Program Committee, we'd like to thank all who contributed to the scientific program on behalf of the IAAP and the APS. We would also like to thank the many Congress registrants for helping to make this such a successful event, both for the IAAP and the APS.

All abstracts presented here have been blind reviewed by a dedicated group of volunteer reviewers, who deserve our sincerest thanks for participating in the review process, many of them dedicating a considerable amount of their time to ensuring the high quality of presentations during the Congress.

This publication would not have been possible without the dedication and hard work of those at the Australian Psychological Society, who worked tirelessly to proof read, collate and format these abstracts. We are extremely grateful and thankful to Joanne Howard, Athena Politis, Renee Taylor, Jennifer Jackson, Kylie Murphy, Angela Nicholas, and many, many others for their support. Special thanks must also be paid to Laura Sciacchitano for her tireless effort and enthusiasm in completing this publication.

Vicky Mrowinski BBSoc (Hons) Assoc MAPS, Michael Kyrios PhD FAPS and Nicholas Voudouris PhD MAPS

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Opening Keynote Address

The more who die, the less we care: Psychic numbing and genocide

SLOVIC, P. (Decision Research and University of Oregon)

Most people are caring and will exert great effort to rescue individual victims whose needy plight comes to their attention. These same good people, however, often become numbly indifferent to the plight of individuals who are "one of many" in a much greater problem. Why does this occur? The answer to this question will help us answer a related question that is the topic of this talk: Why, over the past century, have good people repeatedly ignored mass murder and genocide? I shall draw from psychological research to show how the statistics of mass murder or genocide, no matter how large the numbers, fail to convey the true meaning of such atrocities. The reported numbers of deaths represent dry statistics, "human beings with the tears dried off," that fail to spark emotion or feeling and thus fail to motivate action. Recognizing that we cannot rely only upon our moral feelings to motivate proper action against genocide, we must look to moral argument and international law. The 1948 Genocide Convention was supposed to meet this need, but it has not been effective. It is time to examine this failure in light of the psychological deficiencies I shall describe and design legal and institutional mechanisms that will enforce proper response to genocide and other forms of mass murder.

Abstracts of the 27th International Congress of Applied Psychology

State of the Art Addresses

Promoting health behaviour change

ABRAHAM, C. (University of Sussex)

Behaviour patterns have a critical impact on health and are modifiable. This talk will focus on how we can modify preventive health behaviours. Health-related behaviour patterns are embedded in national and international legislative and social contexts. Consequently, promoting health behaviour change may sometimes be best addressed through policy and legislative reform. Other behaviour patterns may be most effectively resolved through community development or organisational change (including worksite interventions). Whether interventions are designed to change social structure or individual regulation, they must be based on empirically supported models of health-related behaviour. The utility of the "Information, Motivation, Behavioural Skills" model and the "Reflective Impulsive Model" will be discussed. Evidence suggests that effective health promotion depends on the quality of intervention planning and the six-stage "Intervention Mapping" approach to intervention design will be introduced. In addition, guidance produced the UK Health and Clinical Excellence on health promotion targets and practitioner competencies will also be reviewed briefly. Designing health promotion interventions depends on implementation of single or multiple behaviour change techniques. Such techniques must directly impact on the processes which maintain and change targeted behaviour patterns. This necessitates an empirically-based, consensual understanding of the causal processes which shape health behaviour. In addition, intervention designers need to be able to choose from a range of tested and defined techniques that have the capacity to alter underlying regulatory processes. A recently-extended taxonomy of behaviour change techniques will be presented and discussed. The effectiveness of behaviour change interventions can only be established through empirical evaluation. Unfortunately, even costly health promotion interventions are not always evaluated and so contribute nothing to our understanding of "what works". When interventions are undertaken both internal and external validity and mediating processes should be considered. External validity needs to be

ensured in planning and evaluation and the RE-AIM model will be discussed to emphasise this point.

Behavioral economics applied: Suggestions for policy making

ANTONIDES, G. (Wageningen University)

Behavioral economics combines economics with other social science disciplines, notably psychology, and aims at better explanations of economic behavior by taking into account bounded rationality in decision processes, bounded will-power, bounded selfishness and esteem needs of decision makers. Behavioral economics has first studied heuristics and biases in the laboratory, then has been applied to the field and to general economic theory, and finally has become relevant to policy making of the government, consumer interest groups and companies. Several theories capturing bounded rationality employ the distinction between analytic and intuitive types of decision making, including the elaboration likelihood model, dual processing models, system I versus system II models, and neuroeconomic models. In general, the use of intuitive types of decision making leads to suboptimal or undesirable decision outcomes, hence several ideas have been developed to help people to achieve optimal and desirable outcomes. Such ideas include teaching, learning, communication, and changing the context of the choice situation. In addition, rules and laws may be applied with the goal of demotivating undesirable behavior. A number of policy instruments may be used to guide people's behavior in order to obtain optimal and desirable outcomes. Typically, behavioral economic policy instruments favor liberal paternalistic policy applications, i.e., applications aimed at influencing decision making of people with limited rationality and bounded will-power, without constraining rational decision makers with strong will-power. Such policies include providing information, changing the status quo, framing the decision context, and using contrast, compromise, format, probability, and motivational effects. For each of these policy alternatives a number of examples are given. Whereas neo-classical economics has mainly led to paternalistic policy instruments, e.g., pricing and taxation, behavioral economics offers many

alternatives that 'nudge' people's behavior into the desired direction without enforcement.

Vocational psychology: Current status and future directions

BLUSTEIN, D. (Boston College)

This state of the art presentation will provide a critical analysis of vocational psychology, which has historically focused on work-related concerns, dilemmas, and adjustment challenges at an individual level. Vocational psychology provides the theoretical and empirical support for career counseling, career development education, and public policy initiatives pertaining to education, career development, and labor policy. Beginning with a review of the major theoretical and practice paradigms, the presentation will review illustrative research trajectories in vocational psychology. The presentation will conclude with a review of challenges and opportunities for vocational psychology, highlighting the impact of recent movements to expand the purview of the field to include all individuals who work and who seek work.

Global special issue on psychology and poverty reduction

CARR, S. (Massey University), BANDAWE, C. (University of Malawi)

Psychology currently has little or no profile within poverty reduction initiatives. Demand has not framed our supply. Demand is interdisciplinary, necessitating collaboration with other disciplines, professions, local communities and traditional wisdom. Politically, applied psychology can align with the Millennium Development Goals, focussing on harmonisation of human services and crucially, alignment with local aspirations, while emphasising its own uniqueness and unique contributions. These include theoretical depth, rigour in measurement, and experimental evaluation, both laboratory and field. Capitalising on those strengths, we can develop an applied psychology of Poverty Reduction Strategy Papers (in-country planning for development), human capacity development (including the psychology of global

mobility), budget support to governments vs. project aid to local communities, corporate social responsibility, media psychology in poverty appeals, and the psychology of household health. Promising starts have been made, and these are briefly reviewed in the keynote. Applying psychology to poverty is not just an exercise for science and practice. We can also articulate our professional and ethical values, build capacity within the profession, boost awareness of what we do with policy-makers and global think-tanks, and become more humanitarian in application. We should retain empiricism but focus more on problems of immediate need in the local population. There are at least three initiatives that applied psychologists can join right now. A first is the emergent network Humanitarian Work Psychology (<http://www.humworkpsy.org>). This network has been set up to foster decent work and organisational effectiveness in reducing poverty. Membership is open to anyone with an interest in these goals, and uses 21st-century technology to enable connectivity with applied psychologists in lower, middle and higher income economies. A second initiative will be launched at the ICAP conference, a Global Special Issue focused exclusively on "Psychology and Poverty Reduction" (<http://poverty.massey.ac.nz>). Twelve psychology journals have collaborated together in this project, and conference delegates are warmly invited to attend the Panel Discussion about its present and future goals. Finally and most importantly, applied psychologists can become more involved in empirical evaluations of the kinds of practices that make a difference in poverty reduction, and why. A range of such projects will be discussed.

Geropsychology

FERNANDEZ BALLESTEROS, R. (Autonomous University of Madrid)

With increasing life expectancy and at the same time, decreasing fertility, the world is experiencing "population aging", that is an increase in the proportion of older people in comparison with younger people. Moreover, over the next 50 years, population aging is expected to continue. The increase in life expectancy and in the proportion of older adults

in the total population is paralleled by an increase in research in basic and applied geropsychology. The applied psychology of the aged can be defined as the study of the problematic and non-problematic elderly from a psychological perspective. It is important to emphasize that applied geropsychology cannot be reduced to just the problematic or pathological aged. Biomedical studies of aging generate a negative view of old age because from a biological point of view aging is a continuous process of loss of functionality (reinforcing the existing stereotypes the aged). However, from a psychological point of view, psychosocial functioning cannot be understood with the same principles that govern biological processes. Although there is an increasing risk of decline and a decreasing potential for growth across the adult life span, the nature of adult development has to be understood as multidimensional in which gains and losses can coexist. Psychological development is a lifelong process. There is large interindividual variability in age-associated changes, and variability increases at least up to the 7th decade of life. In recognition of heterogeneity of aging, authors agree on three different forms of aging: usual or normal, pathological, and optimal or successful. Normal aging refers to growing old, even when some manifest illness occur; the individual continues being independent. Optimal aging is the aging that would be possible under optimal personal and environmental conditions with high physical, psychological, and social functioning. Finally, pathological aging refers to changes due to physical and/or mental illness inducing disability and dependency in the older individual. In addition to the interindividual variability, there is also a broad possibility of change or plasticity. Thus, individuals have a dynamic capacity for change across the life-span, and effective interventions are needed to promote positive change, maintain functioning, reverse negative changes (if possible), or at least delay age-associated negative changes to foster maintaining well-being across old age. In summary, psychologists can contribute not only to clinical gerontology but, also, to the extension of healthy life through promotion of active aging, health maintenance, and prevention of disability through the development of healthy habits and life styles. These topics are important recommendations in the II International Plan of

Action on Aging (UN, 2002) and the World Health Organization (WHO, 2002) and could be considered as the core of Geropsychology.

Success stories, squabbles, surprises, and suggestions for research in industrial psychology

FISHER, C. (Bond University)

This talk starts with a brief overview of the identity and future of the field of industrial psychology, together with discussion of the persistent “research-practice gap.” While industrial psychology includes at a minimum research on recruitment, selection, training, and performance appraisal, I will spend the bulk of the talk discussing research and issues in employee selection. The talk highlights first the major success stories for industrial psychology – areas in which we have made major discoveries and impacted the practice of employee selection. Next, I will identify squabbles – areas characterised by vigorous debate and disagreement in the selection literature. I will then discuss a few surprises – interesting or novel findings that I encountered while preparing the handbook chapter. Finally, I will suggest some areas for future research on employee selection.

Psychopathological consequences of terrorist attacks and their treatment

GARCIA VERA, M.P. (University of Madrid)

The spread of terrorism to developed countries has made it a world wide focus of concern and a new focus of research. This research has explored the psychopathological consequences of the attacks and the best ways to treat them. Although Posttraumatic Stress Disorder (PTSD) is the most common disorder resulting from a terrorist attack, research has shown that other disorders occur like depressive disorders, agoraphobia, panic disorder and generalized anxiety disorder. These disorders may appear with or without PTSD. The probability of suffering these disorders and their persistence depends on a set of variables that include characteristics and severity of the attack, and the amount of exposure victims have to the

attack and its consequences. We have a wide variety of possible treatments at our disposal. Research to date supports the use of cognitive-behavioural therapy as the treatment of choice. In addition, further research may support the efficacy and utility of other treatments.

The evolution of ethics in psychology: Going international and global

GAUTHIER, J. (Laval University)

Many ethics codes for psychologists have been developed by national psychology organizations. However, psychologists live in a globalizing world where traditional boundaries are fading and, therefore, they increasingly work with persons from diverse cultural backgrounds within their own country or in other countries. Ethics is at the core of psychology as a scientific discipline and a profession providing services to the public. It takes a conscious effort to understand the implications for psychology of the cultural differences that exist, especially since most of us have not been nurtured or socialized in the multicultural aspects of today's changing world. In this address, I will review formally adopted regional and international ethics documents intended to be applied across national boundaries and discuss their meaning in terms of the evolution of ethics in psychology. In addition, I will review the research literature on ethics from an international perspective and highlight important questions to consider for the advancement of international ethics. I will suggest that hopes for psychology's contribution to building a better world require the promotion of aspirational principles and that there is promise of worldwide benefit for psychologists and those whom they serve in expanding our international horizons and global perspective.

The dragons of inaction: Why we do less than we should

GIFFORD, R. (University of Victoria)

Most people think that environmental problems are important, but too few are engaged in enough pro-environmental behavior to prevent increasing problems of many kinds. Why is that? Structural barriers such as poverty and climate-

averse infrastructure are part of the answer, but psychological barriers also impede behavioral choices that would facilitate pro-environmental behavior choices. Although many individuals are engaged in some ameliorative action, most could do more because they are hindered by six types of barriers: limited cognition, ideology, social comparison, investments, mistrust, and limited behavior. Structural barriers must be removed wherever possible, but this is unlikely to be sufficient. Psychologists must work with other scientists, technical experts, and policy-makers to help citizens overcome these psychological barriers.

Traffic Psychology: A State of the Art Review

GLENDON, I. (Griffith University)

An analysis of nearly 1500 empirical traffic psychology papers published during the years 1998–2008 revealed authors from 52 countries. However, authorship was concentrated in developed nations, with three countries contributing 54% of publications during the sampled period. Over 100 nations, containing almost one third of the world's population, had no representation at all. Only a handful of papers used traffic psychology models as a conceptual basis. Around 15 percent adopted some recognisable theoretical framework as a conceptual basis for study – the remaining 85 percent were driven by data exploration, correlational designs or statistical modelling. The theory of planned behaviour (TPB) – including its predecessor (theory of reasoned action – TRA) and TPB variants was the most frequently adopted conceptual framework. While most conceptual frameworks appeared in only a single publication, the TPB was identified as the conceptual basis in 33 studies and the TRA in a further five studies. Single-measure cross-sectional designs were the most commonly adopted design for the widely-used questionnaire/survey data collection method. Only 28 studies adopted an intervention or evaluation design. To collect data on a vast range of variables, 542 tests, questionnaires and other measures were used in these studies. Of these 152 were driving-specific measures – the remainder being generic measures. A rich variety of participant origins, data collection methods

and instruments employed was matched by considerable diversity in data analysis techniques, with over 440 techniques being identified. Conclusions focused on the need for greater internationalisation of traffic psychology, a more prominent role for theory and conceptual models in traffic psychology research, bridging the researcher-practitioner divide, methodology, extending the range and nature of variables studied and analysed, training, and extending traffic psychology to link more closely with other transportation domains.

Technical advances and guidelines for improving testing practices

HAMBLETON, R. (University of Massachusetts),
BARTRUM, D. (SLH Group Limited), OAKLAND, T.
(University of Florida)

The number of educational and psychological tests administered each year around the world continues to grow. Educational reform in many countries has resulted in a major expansion of state and national testing programs, including participation in international assessments such as TIMSS and PISA. We do not know just how well these new tests are being constructed and used to make effective decisions about individuals and programs. What is clear is that the testing methodology to support these individual and programmatic decisions is very much on the increase and more statistically sophisticated than in the past: We have seen the transition from classical to modern measurement models and methods, we have seen the increased use of generalizability theory and structural equation modelling, and we have seen the transition from paper and pencil testing to computer-based testing. In this presentation, we will provide a brief review of types of tests and test uses around the world, emphasize several psychometric topics that are having consequences for developers and users of tests—e.g., item response theory, computer based testing, new item types, detection of potentially biased test items, and test adaptation methodology, and we will review the guidelines prepared by the International Test Commission and EFPA for improving testing practices around the world.

Media and Consumer Psychology

KARDES, F. (University of Cincinnati), GODDARD, P.
(Northern Kentucky University), HAN, X. (University
of Cincinnati), PFEIFFER, B. E. (University of New
Hampshire)

Consumer judgment and decision making is influenced by a large and complex set of variables that capture the attention and interest of consumers; influence how consumers acquire, retain, and revise product knowledge; and influence how product knowledge is used. Consistent with the implications of the selective hypothesis testing model, selective attention, selective encoding, and selective retrieval processes determine what information is likely to be used and how it is used. The mass media prime a wide variety of concepts that influence the interpretation, evaluation, and choice of products and services. New data on the subliminal prime-to-behavior pathway will be presented. Dual-process models emphasize that effortful information processing occurs only when consumers are sufficiently motivated and able to do so; otherwise, a wide variety of simplifying processes are likely to be used. Rather than using all relevant information and knowledge, consumers typically rely on the subset of information and knowledge that is most readily accessible from memory, provided that this subset is perceived as relevant or diagnostic. Missing information is often neglected, even when this information is diagnostic, and this can lead to strong judgments based on weak evidence. Implications of selective processing and persuasion models for understanding marketing alcohol to youth will be discussed. Considered together, these psychological processes have important implications for understanding how consumers make judgments and decisions and for how policymakers can help consumers make better judgments and decisions.

Counseling Psychology: A review of trends, development, and challenges

LEONG, F. (Michigan State University), SAVICKAS,
M. (Neoucom), LEACH, M. (University of Louisville)

In this presentation, my colleagues (Mark Savickas and Mark Leach) and I will provide an overview to the field of Counseling Psychology as one of the specialties within applied psychology. We begin with an historical overview, followed by an attempt at defining the field in relation to some similar and overlapping specialties. Next, we attend to the trends and key developments within the field, emphasizing an international perspective. We end the chapter with a discussion of the challenges and opportunities for this field as well as an articulation of the potential future developments in the field. We wanted to point out that there is a heavy focus on the field from the perspective of the United States, not because of its superiority but because the field has been most active within that country. For example, despite its long history, the International Association of Applied Psychology did not include a division on Counseling Psychology until 2002. Only recently, has there been a growth of counseling psychology training programs and research activities outside of North America. In most countries around the world, psychological training and research related to mental health had been provided primarily by Clinical and School psychology for the past several decades while Counseling Psychology was strongly embedded and isolated in the mid-western part of the United States.

Group trauma, oppression and liberation: Exploring principles of emancipatory practice in communities

MOANE, G. (University College Dublin)

Community psychologists share an interest with many other areas of psychology in developing praxes that can enhance wellbeing and social justice. Yet as psychologists engage with diverse groups and communities characterized by trauma, marginalization and oppression, the limits of traditional psychological interventions have become apparent. Many approaches have been criticized for excluding the voices of those who are marginalized, for insensitivity to specific local conditions and for possibly reproducing conditions of inequality and powerlessness. In the Irish context such criticisms have emerged most recently from survivors of abuse in institutions run by the Catholic Church. While

approaches based on clinical psychology, counseling and psychotherapy have had a vital role, survivors have also sought other forms of healing, support and solidarity from psychologists. A key principle for psychologists working with survivors and other marginalized groups in communities is that of working as partners rather than as experts. However the enterprise of working in partnership or solidarity often involves working across boundaries of power and privilege, with the accompanying risks for psychologists of reproducing power inequalities and oppression. Working in partnership thus calls for both a critique and the development of new principles for practice that can be emancipatory. This paper will aim to identify principles underlying emancipatory practice drawing particularly on specific examples of feminist and liberation psychologies as they have been applied in local (Irish) and global contexts. Both feminist and liberation psychologies have common roots in liberation and anticolonial movements and share efforts to foster liberating individual and social transformations that would help to attain healing and social justice. Both seek to develop bottom up approaches involving participatory practices that facilitate healing, giving voice, recording and inscribing experiences, working in alliance and forging connections with other groups and agents of change. Participatory methods are an essential element in bottom up approaches. Such methods include participatory action research (PAR) and participatory pedagogies that involve creating dialogical spaces, often across differences of class, ethnicity, nationality and other dimensions of privilege and inequality, posing challenges that have been much discussed in feminist, liberation and critical psychologies.

Heteronomy and autonomy in learning and instruction: Roots, concepts, and functions of a basic issue

NENNIGER, P. (University of Koblenz-Landau)

Discussions about value, place, conditions and effects of heteronomous and autonomous learning already refer to a centennial tradition in philosophical, educational and instructional areas. In psychology and education there exists meanwhile a widespread and heterogeneous

corpus of theoretical concepts as well as a large field of applicative contexts which are – not surprisingly – accompanied by increasing, but sometimes contradictory needs for a more differentiated, but simultaneously also a more coherent understanding of this issue. In our days most key-concepts refer to theories about self-directed or self-regulated learning, especially if associated with instructional issues or with themes about lifelong learning. However, already a short look on the history of ideas related to this topos highlight the multiple pathways behind which have to be considered if not only an extensive and perhaps superficial but a comprehensive and profound understanding should be achieved. For this reason the lecture starts with a sketch of philosophical ideas about autonomy and heteronomy in education, which is followed by a short outline of the most important historical and systematic roots of this phenomenon, mainly within the body of learning and instruction. On this foundation, basic psychological concepts founding most theories of self-directed or self-regulated learning are exposed in order to critically discuss the state-of-the-art of the respective research, including an analysis of the respective level of empirical evidence. In consequence of the results from the above deliberations, meaning and importance of autonomy and heteronomy in learning as well as their functions within various educational and instructional contexts are revisited and a list of their most important characteristic effects will be established. The lecture concludes with an outlook on aims and desiderata for further theoretical and related methodological developments and a perspective of areas for future promising applications.

A century of Psychology and Law: Successes, challenges and future opportunities

OGLOFF, J. R. P. (Monash University)

While it is difficult to mark the true beginning of the field of psychology and law or “legal psychology,” a conventional marker is Munsterberg’s seminal work, *On the Witness Stand: Essays on Psychology and Crime* (1908). In the book, he wrote that “my only purpose is to turn the attention of serious men to an

absurdly neglected field [psychology and law] which demands the full attention of the social community” (Munsterberg, 1908, p. 12). The existence of the contemporary field of psychology and law has therefore now passed the first century mark. Given that milestone, it is appropriate and fitting to reflect on the development of the field. Having spent more than 25 years in the field, this is a particularly exciting opportunity. It is my view that by considering the development and progress of the field, we may be able to identify some successes, challenges and ultimately future opportunities. In this talk, I will consider the early development of the field. Many will be surprised to learn of the rather inauspicious beginnings of the field that essentially led to its demise by the Second World War. The modern rise of psychology and law really began in the 1960s and has continued ever since. Two areas of research that have led to successes in practice and policy development will be briefly reviewed. The first is an area in which I have worked for many years, the prediction of risk for violence. This area comes from the area of clinical forensic psychology. To demonstrate an example from experimental psychology, I will also briefly note that considerable advances that have been made in the police line-up literature that is derived from the eyewitness testimony literature. Despite the successes, many challenges exist and will be discussed. Finally, the presentation concludes with a review of some of the factors that I believe are necessary to realise future opportunities for the field.

Psychology and societal development

PANDEY, J. (Central University of Bihar)

Disparities in the level of socio-economic development across as well as within nations have a long history. Analysis of socioeconomic development is an interdisciplinary subject which has not received much attention of psychologists. Psychology’s pre-occupation with covert mental processes in a de-contextualized manner and its commitment to individualism drastically undermined its engagement with macro level societal problems. It is argued that psychological theories being products of specific cultural milieu function inadequately in non-western societies, limiting use of such

psychological theories. Thus, psychological knowledge and practice imported from west have limitations. The paper examines progress and potentialities of indigenous psychologies in understanding societal development.

New developments in Occupational Health Psychology

PEIRO, J.M. (University of Valencia)

Occupational Health Psychology (OHP) has progressively been established as a discipline during the last decades. In the last decade, important developments have taken place and new approaches and extensions have been produced. A positive psychology perspective is being introduced in this discipline as well as a stronger emphasis on internationalization. In the present State Of The Art keynote the scope of the field and the the recent developments of the discipline will be analyzed. Special attention will be paid to employer-employee relationships, work design and work systems improvement; organizational climate; the role of leadership in occupational health; recent developments of work-stress research and work-life conciliation. Several opportunities and challenges will be considered for the development of this discipline during the near future in the global context of our societies

Cross cultural psychology

PENG, K. (University of California)

Abstract not available at time of publication

Clinical child psychology: A specialty for research and practice

ROBERTS, M. (University of Kansas)

Clinical child psychologists provide services and conduct research on a wide range of problems and psychological concerns. This presentation will describe the development of clinical child psychology as a research and practice specialty of applied psychology which seeks to investigate and remediate mental health problems for children, adolescents, and their families. The

worldwide needs are immense for improved scientific understanding of children's mental and behavioral disorders and for quality preventive and clinical services. The epidemiology and range of children's mental health problems appears to be similar for developing and developed areas of the world. Thus, aspects of clinical child psychology are found in different countries with a broad range of populations, settings, problems, assessment, and intervention techniques. These will be described with examples representing some international diversity. The range and scope of research and practice in this specialty will be examined in terms of how specialists are trained and where they function (including independent and group practice, schools, mental health centers, pediatric primary care and children's hospitals, universities, and research institutes). Innovative trends will be described in the specialty including developmental psychopathology, evidence-based practice, cultural competence pediatric psychopharmacology, and pediatric psychology. This presentation will illustrate some of the formal actions in specialty recognition in various forms in different countries. Particular challenges and opportunities for advancement will include evidence based practice outside of research clinics, training issues and competencies in clinical child, continuing education and enhancing practitioner competencies, reimbursement, and funding for services and research. The future developments of the field will require attention to such elements as diagnostic developments, treatment innovation and implementation, serious emotional disturbances, community violence, effects of community violence, trauma, war, and terrorism, interdisciplinary research and practice, pediatric psychopharmacology, clinical child neurosciences, and genomics.

What's new in work psychology?

ROE, R. (Maastricht University)

Work Psychology is one of the oldest areas of applied psychology, originally dealing with accident prevention, work and rest scheduling, and job and work place design. This address describes how work psychology has evolved in response to changes in the nature of work, the

adoption of new technologies, novel approaches to organizing and changing work-careers in men and women, and how it has developed its own theories and knowledge base over the years. A brief outline is given of the main theories, with an emphasis on the performance of complex tasks and various types of regulation (activity, energy, emotion, health) underlying performance processes, and how these theories can contribute to identifying, preventing and resolving problems in the domain of work as well as in adjacent domains (e.g. traffic). Next, a number of trends in work are reviewed, including changes from individual to team work, from face-to-face to mediated work, from single role to multi-role work, from stable work time and workplaces to flexwork and virtual work, and from leader-managed to self-managed work. Changes regarding the use of time, in terms of meeting deadlines as well as managing the work career are considered as well. Overall, researchers in Work Psychology have effectively responded to these trends, allowing practising work psychologists to offer helpful assistance to working people and their families, as well as to managers and policy makers. Examples of new methods and techniques will serve to illustrate this. Yet, the ongoing nature of the changes, the high rate of change and the increasing impact of cross-national contexts, keep posing new challenges that work psychologists will have to address. A brief discussion of these challenges will conclude this address.

Clinical neuropsychology: Research and practice

RUFF, R. (University of California - San Francisco)

Clinical neuropsychology is a field of study focused on the relationship between brain and behavior. In its 60 year history, the focus has shifted from localizing brain tumors to providing quantitative descriptions of those cognitive and emotional domains that are compromised in patients with a wide range of neurological and psychiatric disorders. The underlying theoretical construct for the cognitive domains that are assessed includes the following: (1) sensory and motor skills, (2) attention and concentration, (3) language skills, (4) visuospatial reasoning, (5) memory and learning, (6) executive functioning, and (7) intelligence. As to the assessment of

emotional functioning, the challenges involve estimating premorbid personality traits in order to determine potential changes due to brain damage. Neuropsychological services have been specifically adapted to meet the different needs of seeing patients in the inpatient versus outpatient setting. Finally, future directions for the discipline of clinical neuropsychology will be discussed.

Psychology and the protection of refugees and conflict-affected populations

STEEL, Z. (University of New South Wales),
BATEMAN STEEL, C.R. (University of New South Wales)

Forced migration is commonly associated with extreme mental stressors. Violence, conflict, social and economic degradation, dislocation, loss, and instability all create a picture of immense vulnerability for affected persons and populations. The mental health consequences of such conditions have made it incumbent on psychology to play a multitude of roles in documenting, assessing, and intervening to support those affected at all stages of the process of forced migration. This State of the Art presentation outlines the historical development of the complex relationship between psychology and the experience of forced migration. The development of the trauma model with particular emphasis on the diagnosis of posttraumatic stress disorder has allowed psychologists and mental health professionals to document the mental health consequences of forced migration. This has been pivotal in promoting a global campaign to promote and protect the human rights of refugees and civilian populations affected by mass conflict in the developing world. More recently the trauma model has been pivotal in documenting the adverse mental health consequences of policies of deterrence that have been used by Western governments to limit the flow of asylum seekers internationally often at great cost to those subject to the policies. Refugee determination is a particular area that has emerged requiring specialist psychological input. An increasing body of evidence suggests that decision makers consistently misinterpret the mental health effects of traumatic stress as

evidence that undermines the credibility of refugee applicants. There is substantial need for improvement in the inclusion, quality, and use of psychological evidence to avoid situations where bona fide refugees are returned to situations of extreme danger due to poor determination procedures. The address also reviews the cultural critique of the trauma model with a particular focus on the rights of refugees communities to determine how to respond to their own history of suffering. In conclusion a model that may provide a valuable tool for continued engagement in supporting forced migrant mental health is proposed.

The state of the art in rehabilitation psychology

STIERS, W. (Johns Hopkins University School of Medicine)

It is estimated that 10% of the world's population, approximately 650 million people, experience some form of disability. Rehabilitation Psychology is a specialty which applies psychological knowledge and skills on behalf of individuals with physical and cognitive impairments and chronic health conditions in order to maximize their health and welfare, independence and choice, functional abilities, and social role participation. Dr. Stiers (Past-President of the Division of Rehabilitation Psychology of the American Psychological Association) will discuss theoretical models of disability, and their relation to the field of Rehabilitation Psychology. He will discuss the historical development of Rehabilitation Psychology, its current state, and its relevance to important on-going world health needs. Dr. Stiers will also discuss the evaluation of Rehabilitation Psychology training, including a structure/process/outcome model for evaluating programs, and the use of observational behavioral check-lists for evaluating students. He will also suggest pathways for the future development of Rehabilitation Psychology.

Applied sport psychology: Beware the sun, Icarus

TERRY, P. (University of Southern Queensland)

Most people involved in sport freely acknowledge that the quality of their performance is subject to significant fluctuations that are often driven by psychological inconsistencies. Great champions such as Michael Phelps, Maria Sharapova, Cristiano Ronaldo and Rafael Nadal have all used sport psychology techniques to enhance their own impressive performance levels. Applied sport psychology, however, is not necessarily about developing sporting titans or even about performance at all. It is, in the broadest sense, about using psychological principles, knowledge, strategies, and techniques to address any issue in sport. In this presentation, I will trace the historical progress of applied sport psychology from the very earliest writings and investigations in Europe, Asia and North America through to the current state of the art across the globe. Along the way, I will present some of the landmark publications and key developments, address past trends, present challenges and opportunities, and predict future developments in the field. Two enduring challenges for applied sport psychology are, firstly, to educate the sporting community and the general public about what sport psychology can and cannot achieve and, secondly, to ensure that claimed benefits are pitched at the right level and are supported by compelling evidence. Just as, in Greek mythology, Icarus flew too close to the sun, melted the wax that held his wings together and fell to his death, so the profession of applied sport psychology risks losing its credibility if practitioners over-promise on what can realistically be achieved and then fail to deliver on their promises. Equally, if applied sport psychologists downplay the performance gains and the other benefits that their profession can deliver (perhaps the equivalent of Icarus remaining with his feet firmly on the ground) then the sports world will look elsewhere for specialist assistance.

From studying cognitive systems to developing cognitive technologies

VELICHKOVSKY, B.M. (Dresden University of Technology and Kurchatov Research Center)

Research on human cognition immensely benefited from application of methods and models of natural sciences. Within the NBIC-

framework [1], one could expect a strong feedback from cognitive studies to the fields of computer sciences, molecular biology and nanotechnology. To find these synergies we investigated brain mechanisms of active vision and their implications for the development of innovative human-computer interfaces. Fast video-based eyetracking is the method of choice in analyses of visual cognition. As a matter of fact, eye movements are a common output of a number of phylogenetically evolved brain systems. In the talk, we demonstrate how eyetracking analysis disentangles these influences on task solution completing data obtained with neuroimaging methods. Three groups of tasks are considered, with corresponding paradigms of eyetracking and neuroimaging. The first paradigm consists in the analysis of distractor influences on the duration of fixations in free exploration of complex images. The second investigates the role of attention in the perception of static and dynamic visual scenes. Finally, we demonstrate the role of social gaze in processes of communication. Different brain systems are at play in regulating parameters of eye movements in these experimental situations, from low-level midbrain structures to those of medial prefrontal cortex. Therefore, by monitoring human eye movements one can conclude on the work of these brain systems and on the task at hand. We analyse implications of these findings for designing the next generation of cognitive technologies such as adaptive assistance systems as well as attentive and multimodal interfaces ([2, 3]). At the end, we address a broader perspective on evolution of converging technologies within the NBIC-framework.

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References:

1. W.S.Bainbridge, M.C.Roco (2006). *Managing nano-bio-info-cogno innovations: Converging technologies for improving human performance*. Dordrecht: Springer.
2. B.M.Velichkovsky et al. (2010). *Measurement-related issues in investigation of active vision*. In B. Berglund et al. (Eds.), *Measurement with person*, NY: Taylor & Francis.

3. U.Vogel et al. (2009). *Bi-directional OLED microdisplay for interactive see-through HMDs*, *Journal of the Society for Information Display*, 17(3), 175-184.

Clinical Health Psychology

WEINMAN, J. (Institute of Psychiatry)

Clinical Health Psychology is often represented in quite a narrow way as the application of psychological interventions in patients with physical health problems. The interventions used are typically cognitive-based approaches from clinical psychology, and these have been used with patients with a wide range of physical health problems, predominantly to facilitate better coping and to deal with illness-related distress. However this presentation will attempt to provide a much broader overview of the area by focusing on a range of psychological processes in healthcare, particularly the role of patients' beliefs in response to symptoms, investigations, illness and treatment, and will provide a unifying theoretical model which underpins all these processes. Thus the overview will begin with an introduction to Leventhal's Self-Regulation Model, as this will be used to explain variations in the way people respond to symptoms, illness and treatment. In overviewing the research on responses to symptoms, the main focus will be on ways in which patients' cognitions contribute to delay in help-seeking and to the extent they are reassured by the findings from investigations which are carried out to diagnose the causes of their symptoms. The range of patients' responses to illness will be examined together with the role of illness perceptions in explaining this variation and in providing the basis for interventions to improve illness-related behaviours and health outcomes. A broader consideration of the contribution and efficacy of psychological interventions in chronic physical illness will also be presented. The final part of the talk will focus on patients' responses to treatment, and the ways in which patients' beliefs can influence this. This will overview recent research showing the importance of beliefs about illness and treatment in motivating adherence to treatment, as well as in influencing both placebo and nocebo responses. In providing such a broad overview of current

research in clinical health psychology, it is hoped that this talk will capture the breadth and potential of this fast growing area of applied psychology.

Organisational Psychology

WOOD, R. (University of New South Wales)

Organizational Psychology (OP) is a constantly evolving discipline in which researchers seek to understand, predict, and explain the behavior of individuals and teams and to propose solutions to emerging organizational problems. A diverse range of theories are used in the study of organizational phenomena, including theories that are imported from basic psychology and theories that have been developed within the OP field to explain specific organizational phenomena such as goal setting, leadership and organizational citizenship. The building blocks of OP, including organizational context, personal factors, performance, well-being and turnover, and the interactions between individual and organizational contexts are reviewed. This is followed by a selective review of topics that illustrate the range and contributions of OP research, including leadership, teams, discretionary behavior, both positive and negative, justice, and organizational culture. The different roles of OP researchers, consultants and practitioners are discussed and we conclude with a discussion of the challenges and opportunities for OP arising from globalization, technology developments and concerns about the environment and sustainability within organizations.

Abstracts of the 27th International Congress of Applied Psychology

Presidential Addresses

The impact of the internet revolution on tests and testing

BARTRAM, D. (SHL Group)

I will outline the way in which the internet has produced a major change in the way assessment is carried out in work and organizational settings. Not only has the volume of test use increased dramatically with the advent of internet testing but also the way in which tests are used has changed. The internet has heralded a revolution in practice as great as or greater than that brought about by Gutenberg's invention of moveable type. It has not only increased accessibility to information for people all around the world, but it has changed the way people use information. In testing, unproctored or unsupervised modes of assessment have been the biggest growth area and the most controversial, raising issues of test security, increased possibilities of cheating and candidate authentication as well as bringing enormous benefits for both employers and candidates. The relationship between test vendors, their clients and test takers has also changed as has the role of the psychologist in the test design, development, delivery and application processes. I will argue that while these changes are radical ones that sometimes challenge our assumptions about what constitutes good practice, technology, both in the realms of IT and in psychometrics have developed to meet these challenges.

Adolescent political activism and happiness across the lifespan

BOEHNKE, K. (Jacobs University)

The Presidential Address of Division 11, "Political Psychology," concentrates on presenting one study that encompasses reference to the core topic of the division: Peace Psychology. Utilizing latent growth modeling, the long-term development of worries among 220 peace movement supporters is examined. Data originate from a seven-wave German longitudinal study started in 1985 with on average 14-year-olds. Waves were interspersed 3 ½ years each. Activists are assumed to have lower (self-related) microworries (H1) and higher

macroworries (concerned with larger entities; H2) than non-activists at the onset of the study. Activists who appraised the threat of nuclear war as high in 1985 are assumed to report better mental health 21 years later (H3) than non-activists and activists who did not perceive a high threat. Activists are assumed to express relatively more macroworries than non-activists in mid-adulthood (H4). All four hypotheses were confirmed. Results are interpreted in a stress-coping (Lazarus) and resource (Elder) framework, suggesting that agency vis-à-vis perceived sociopolitical threats is an indicator for good individual coping resources that foster a positive mental-health trajectory.

Professional practice Settings - on-line, off-line, in the community, in the office

GORDON, A. (Private Practice)

In its early conception, professional practice for a psychologist involved the expert sitting in the office and being visited by the supplicant. The psychologist ran the show, took responsibility, was the law. Times have changed. Registration and accreditation issues, licensure of the psychologist, codes of conduct ... the psychologist has to play by the rules and those rules are transparent and accessible to the discerning client. Clients now can receive therapy in a variety of modes - face-to-face, electronically, individually, in a group. Health records can be accessed by other staff. Self-help manuals prevail. Scopes of practice often include individuals and communities in trauma, or recovering from traumatic events. Conditions for some clients are far from optimal - homeless, detained, traumatised. For some, the hurt is inter-generational and it may be impossible for the individual practitioner to heal. When should we stop trying? Do the rules of professional practice allow us to care for others and ourselves in the most effective ways? Where is the line between professional and personal drawn in such situations? How can professional practising psychologists impact the world for good?

Proactive coping, positive affect and well-being

GREENGLASS, E. (York University)

Traditionally, psychological research has focused on negative states, their determinants and consequences. Psychology's focus on the study of negative constructs has tended to obscure the role of positive constructs in psychological functioning. Subjective feelings of well-being are characterized by positive mood, feeling energetic and perceiving obstacles as challenges rather than threats. Increasingly, research is focusing on factors that contribute in a positive way to psychological well-being and flourishing in human beings. This presentation will address some of the current theoretical, methodological and practical considerations associated with positive constructs and their role in psychological functioning. For example, positive emotions may have a broadening effect on cognitions and mood, thus releasing the hold that negative emotions have on them. Positive emotions may also diminish negative emotions by inhibiting their effects. Evidence consistent with this perspective is seen in research showing that people might improve their psychological well-being and physical health by cultivating experiences with positive emotions at opportune moments to cope with negative emotions. Additional research suggests that positive affect is a function of social support and coping strategies. The idea that coping may have positive utility parallels recent research highlighting the role of positive beliefs and emotions in the promotion of health. Data are presented here to indicate that proactive coping promotes positive mood and motivational states. Proactive coping involves goal setting, having efficacious beliefs, and is associated with resources for self-improvement. Since it is associated with self-efficacy and vigor, demands are perceived as a challenge rather than a threat. The inclusion of positive coping is innovative in that its focus is not so much on just responding to negative events, but instead includes a broader range of cognitions and behaviors involving active construction of opportunities and the positive experience of stress. In addition, the mediating role of positive constructs is considered as is their motivational role with reference to behavioral and cognitive

spheres. Theoretical implications of the study of positive constructs, social support, coping and their relationships, are explored particularly with regard to improvement of psychological health and promotion of feelings of well-being.

Emotion-focused and action-focused coping in sport

HANIN, J. (Research Institute for Olympic Sports)

This presentation re-examines traditional distinction between problem-focused and emotion-focused coping reflecting the link between stressful events and the stress-response (Lazarus & Folkman, 1984). Alternative approaches to coping in high-achievement sport is based on the Individual Zones of Optimal Functioning (IZOF) model as applied to pre-competition anxiety, performance-related emotions, and performance process. The following will be discussed: (1) Coping process is multi-modal and not limited to "cognitive and behavioral efforts". Coping targets can be motivation-centered, volition-centered, bodily-centered, action-centered, and communication-centered; (2) Coping is not limited to managing only negatively-toned emotions because negatively-toned emotions are not always detrimental for athletic performance and positively-toned emotions are not always beneficial for all performers; (3) The distinction between state-trait-meta experiences is helpful in the selection of effective coping strategies. State-like emotion intensity (optimal, dysfunctional, and actual) is first identified; trait-like emotion patterns indicate if they can be potential barriers to coping. Finally, meta-emotions as attitudes about experiencing specific emotions indicate if re-framing of existing meta-experiences is needed; (4) Emotion-focused coping uses a set of mental skills directed at optimization of emotional states by maximizing impact of functionally optimal emotions and minimizing harmful effect of dysfunctional emotions. Emotion-focused coping aims to reduce the probability of random and habitual errors whereas disrupted performance triggers dysfunctional emotions and action-focused coping can be more effective; (5) Action-profiling within the framework of the Identification-Control-Correction (ICC) program (Hanin & Hanina, 2009)

provides a tool for dealing with inconsistency of athletic performance (instability of technique, a “lost move syndrome”, and “habitual” performance errors under competitive stress. The optimization of action process triggers functionally optimal emotions; (6) Coping should consider the temporal patterns in emotion-performance relationships in pre-task, mid-task, and post-task stages of performance process. Thus reactive coping targeted on current or past experiences and anticipatory coping focused on the future should be clearly distinguished. To conclude, emotion-focused and action-focused coping in high achievement sport represent a comprehensive program of optimization of athletic performance enhancing cooperation between athletes, coaches, and sport psychologists. The approach is practitioner-oriented and provides a framework and tools for optimization of athletic performance and enhancement of consistent excellence.

Human development and societal development: Is psychology relevant to global human development issues?

KAGITCIBASI, C. (Koc University)

The title of this talk is the same as the title of my 1992 Presidential Address at the Cross-Cultural Psychology International Congress. The subtitle is the same as the title of my APA Award Address presented in 1994. Close to two decades have passed since then, and the issues involved are still very much with us. This is the reason for using the same titles at this time. ‘Human Development’, as constructed by UNDP, derives from the recognition that societal development goes beyond economic development, including education, health and societal well-being in general. Psychology as a science and profession, particularly in terms of large scale applications, can and should be relevant for overall human development. Indeed, the science of psychology, just as any other science, should be accountable to society. However, psychology has remained rather ‘estranged’ from the important societal issues in the ‘Majority World’. It has yet to develop as a policy science. Two main reasons for this are its predominantly individual focus on the one hand, and its Western outlook on the other. Thus, while psychology has accumulated a great deal of

knowledge and know-how toward enhancing human well-being, it is hardly seen as important for societal development efforts. The lack of involvement of psychologists with societal human issues also derives from their own unawareness of the relevance of their knowledge for such problems. An important task for IAAP and particularly for its Division, ‘Psychology and Societal Development’ is to work hard to change this state of affairs. A new identity and role definition are to be devised for psychology as a science and profession in the service of global human well-being. Toward this goal, the accumulated knowledge of Western psychology could be supplemented by endogenous knowledge derived from the rest of the world toward creating ‘integrative syntheses.’ An applied psychology which is informed by such new knowledge, could aspire for universal validity and be truly relevant for the solution of societal, even global human development issues.

Work and Organizational Psychology in a global context

PEIRO, J.M. (University of Valencia)

Globalization is a phenomenon that is impinging the economy, markets, work, labour and organizations in many ways. Work and Organizational Psychology is currently being challenged by this reality and new demands appear for research, education of W&O Psychologists, and professional practice. New opportunities emerge for scientists, scholars and practitioners that require new initiatives and approaches. In the present address the main implications of these emerging phenomena for research (such as cross-cultural approach, and widening the study of the contexts to provide better and more contextualized evidence), education (cooperation for promoting internationalization of teaching and learning, joint programs) and professional practice (competences for working as a practitioner in different contexts and internationally) will be analyzed and discussed. Also the humanitarian cooperation in the field of Work and Organizational Psychology will be considered. Finally, the challenges for IAAP Division 1 and for W&O Psychologists will also be presented. Special attention will be paid to the Alliance for

Organizational Psychology which is being launched by IAAP-Division 1 SIOP and EAWOP.

Psychology in the 21st century: Challenges for psychology students

POTOCNIK, K. (University of Valencia)

A range of important changes in psychology training around the world has taken place in the past decade. Regarding Europe, a significant reform has taken place in order to enhance the employability and mobility of citizens and to increase the international competitiveness of European higher education. Within the context of this reform, European Diploma in Psychology (EDP) has been developed, aiming to set a standard for psychology education and practice. According to these new European standards, a Masters degree and one year of supervised practice are considered as a minimum level of training for future professionals (Lunt, 2005). In contrast, in the USA, a Doctoral degree and a year of internship are set as minimum level of training for psychologists. According to recent changes, students can move from internship to licensure without the requirement of a post-doctorate experience (Hasan & Jeong, 2009). Also in Latin America there have been reforms in psychology teaching and training with attempts to implement common psychology education across different MERCOSUR countries (Peña, 2009). Thus, psychology teaching and training has changed considerably over past years. However, what is not as clear is what students' attitude towards these issues is. What do students think about their training? How satisfied are they with it? Can they manage well with all academic obligations? Do they feel capable of carrying out meaningful research? Do they feel they receive enough training to start a professional career? Overall, are they satisfied with their career choice? This presidential address will aim to reply to these questions by means of a survey applied to psychology students from different countries studying at undergraduate as well as at postgraduate level. In addition, the role of IAAP Division 15 in stimulating student participation in the development of our science and profession will be analysed. Finally, some challenges that could be addressed by Student Division in the future will be outlined.

Treatment of depression: A component analysis

REHM, L. (University of Southern California)

Many therapy manuals exist for the treatment of depression. Most have some empirical support, but they come from different theoretical orientations and make different assumptions about the nature of depression. These manuals also have many components in common. This paper is an attempt to identify and logically group therapy components across manuals. Some are unique to one manual, but most are at least similar in two or more manuals. Some suggestions are made concerning what presenting circumstances might be matched with what component, and how components might be sequenced in treatment planning. Therapy components can be considered the basic competencies of treating depression.

The role of moral sentiment in economic decision making

TYSZKA, T. (Centre for Economic Psychology and Decision Sciences)

Three questions will be discussed in some depth: (1) How do people resolve conflicts between moral sentiments (guilt, gratitude, etc.) and economic self-interest? Do they make trade-offs between moral and material consequences, or do they use decision strategies that do not require such trade-offs? The answer seems to depend on how strong is a moral sentiment associated with violating a given moral norm; (2) How much considerations of justice matter in economic decision making? Research shows that justice consideration can influence preference for income distributions. However, in ranking of the principles of justice in an "abstract" way (merely expressing an opinion) people declare preference for another principle of justice than the one they follow in situations of choice with financial consequences. For example, the principle of Minimizing the Income Range receives very high rank in "abstract" ranking, while this principle is the least popular in choice situations; and (3) Trust and mistrust in economic decision making. Large discrepancy between people's stated and actual trust in

others can be observed. People often say they distrust others, while in their economic interactions with others, such as trust game, they behave as if they trusted others. What is an actual motivation behind such behavior? This might have something to do with preserving one's moral self-image.

Counselling Psychology: The ways forward

YOUNG, R. A. (University of British Columbia)

The aim of this presentation is to address and delineate the ways forward for the discipline and practice of counselling psychology in national and international contexts. Two aspects of the ways forward are included: first, the ways forward within counselling psychology and Division 16, secondly, the ways forward as a discipline in the face of public policy, the health and welfare of people generally, and broad social impact. Specific topics discussed include culture, indigenization, globalization, conceptual frameworks, knowledge transfer, and emerging definitions of counselling psychology.

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Divisional Addresses

The many faces of Sport Psychology: Strength or challenge for the field?

BALAGUÉ, G. (UIC Psychology)

Sport Psychology has been around for many years now, too many to be called a “young discipline”. Still, if we ask people to describe what Sport Psychology is chances are we will not get a consistent definition, often getting contradictory descriptors. This talk will attempt to describe the main areas composing the field of Sport Psychology, their irregular growth in the last 15 years, and the implications for both the academic and the applied domains. Different countries have followed different pathways, and some of these models appear to have more positive outcomes than others. Possible solutions and recommendations for training, research and applied interventions will be discussed.

School psychology across the world: Retrospect and prospect

BURDEN, R. (University of Exeter)

This presentation will review the historical development of school psychology since its beginnings in the 1920s with the aim of identifying its continuing chances of survival. Important factors and events will be highlighted to explain why school psychology practice has moved in different directions at different times and in different parts of the world. Current dilemmas threatening the very existence of the profession in countries such as the UK will be presented and alternative scenarios will be offered as to some possible directions that it might take in order to deal with these.

That's the way the money goes: Can neuropsychological assessment sensibly inform decisions regarding financial competence?

CROWE, S. (La Trobe University)

The last decade has seen mounting pressure on neuropsychologists to provide practical and ecologically valid information about our clients.

This paper presents the results of four studies undertaken by our group which examined the ability of brain impaired individuals to perform tasks associated with financial decision making. These include the evaluation of competent use of automated teller machines, automated transport ticketing machines and automated telephone response devices, development of a questionnaire measure assessing the self-reported ability to manage money and examination of the distinction between money management skills in individuals with and without guardianship orders. The results indicated a strong relationship between neuropsychological measures and competency in automated machine use. On a questionnaire measure, neuropsychological assessment demonstrated a modest ability to predict the overall score (19% of variance), but when more specific items were used, predictive success was significantly higher. Measures of memory explained 63% of variance in whether individuals with brain impairment made late payments of bills or rent, and classification success was high (89.3% of participants correctly classified). Measures of impulse control were strongly related to problematic impulse spending. Individuals who had had administrators appointed performed significantly worse than a comparable control group without administrators on measures of executive/attentional abilities (impulse control, planning, flexibility of thinking and working memory). Suggestions for more concisely predicting problems with financial decision making arising from neuropsychological examinations are presented and the implication of these findings to more broad aspects of activities of daily living such as testamentary capacity, driving and medical decision making is discussed.

Counselling and self-organization

DAUWALDER, J.P. (Universite de Lausanne)

Counselling is a significant field of applied psychology. Mainly concerned with individual interventions 50 years ago, methods of counselling and coaching have spread since then to several broad domains. If we focus on the domain of career counselling and related fields, one might describe observed changes in

counselling techniques as a result of a co-evolution with economic trends, rather than outstanding innovation. The evolution of counselling, seen as a scientific community and its production, could therefore also be understood in terms of self-organization. Actually however, some persistent paradoxes in career counselling have to be overcome: How should we find 'person-environment fit', while eliminating context in assessment? Why prescribe careers, when clients permanently change jobs? Why believe in linear causalities in career construction, which are no more valid for daily experience? How do we understand clients, using terms and instruments which are not intelligible for them? How do we design individual projects, using normative statistics? One of the basic assumptions in counselling is, that counsellors are most efficient while helping people to help themselves. Again this underlines the idea of self-organization: Any person is inextricably situated within specific but also mutually interdependent ecological contexts. Furthermore, dynamics of interaction over time lead to co-evolution, emergence of order and self-organization in people's career and life. Therefore, at different moments of their individual lives, people are also more or less resistant to engage in a counselling process. Some of our research data confirms this observation. Different forms of quality of life have been described as emergent order parameters for self-organization in daily life by one of our studies. Interactive assessment of perceived contextual constraints and resources and their dynamics has been found to be a valuable alternative to normative testing. And finally modelisation of different patterns of interactions between counsellor and client underscores the importance of client's learnings in terms of self-management.

But what does this mean for counseling interventions?

Coaching clients and organizations for self-awareness and perceived self-efficacy beyond the immediate effects of interventions calls for new (meta-)skills for counsellors. The recently developed perspective of 'life design' will be discussed extensively.

Violence risk assessment: Next steps toward moving the field forward

DOUGLAS, K. (Simon Fraser University)

In the past several decades, a solid foundation for the task of violence risk assessment has been laid by successive generations of research. Important violence risk factors have been identified, and useful methods of violence risk assessment have been developed and evaluated. What's next? Much contemporary violence risk assessment discourse focuses upon such concepts as risk reduction, risk management, and dynamic risk. Yet, corresponding empirical efforts lag behind these conceptual developments. In this talk, I will discuss ways in which our field might hasten and facilitate the empirical evaluation of prevailing conceptual themes in risk assessment. Broadly, this involves attempting to bring the "science" and "practice" of violence risk assessment closer together. Specifically, I will discuss several ways in which this might be accomplished, including but not limited to: (a) operationalizing, quantifying, and measuring the idiographic relevance of nomothetically-supported risk factors; (b) drawing on theories of violence to facilitate case conceptualization; (c) measuring the "integrity" of risk assessment in practice; and (d) more assertive attempts to integrate research on risk assessment and risk reduction. The ways in which the revision of the HCR-20 violence risk assessment scheme (HCR:V3) attempts to facilitate some of these goals will also be highlighted.

Psychological success factors in entrepreneurs

FRESE, M. (University of Giessen)

I propose that active actions, (i.e., being self-starting, proactive, and persistent) are central for entrepreneurship theoretically and empirically. An action theory approach to understanding of entrepreneurship is developed. I describe a number studies on action characteristics of entrepreneurs which we have performed that follow from this action theory approach and from the idea that active actions are central for entrepreneurship. For example,

active goal setting, active task planning, active approaches to dealing with errors all lead to higher entrepreneurial success. It follows that an intervention that would increase active approaches should also lead to higher performance – this is, indeed, the case as a theory driven intervention study shows.

**Restorative environments research:
Issues in measurement and analysis**

HARTIG, T. (Uppsala University)

Starting from the early theoretical statements and empirical studies of the 1970s and 1980s, research on restorative environments has proceeded at an increasingly rapid rate. As a positive complement to research on environmental stress, restorative environments research has attracted members of social and behavioral sciences other than environmental psychology, and the potential practical value of the research has been noted in applied fields such as architecture, horticulture, landscape architecture, forestry, environmental medicine, and public health. In tandem with this growth of interest, the coverage of environments and populations has become broader and more diversified. The initial interest in the restorative values of natural environments still shows in much of the work, but more attention is now being given to restoration in settings that are not predominantly natural, such as homes, cafes, churches, zoos, and historical sites. Similarly, concern for people in cities still motivates much of the research, but the sampling of people has become more specific, following recognition of the special circumstances and restoration needs of children, parents, the elderly, people suffering from depression, socioeconomically disadvantaged people, and other groups. The expansion and articulation of the research area has entailed increased awareness of a variety of issues in measurement and analysis. I will address some of those issues in this presentation. I will first overview different types of variables of interest (including antecedent, environment, and outcome), the approaches that have been taken to measuring those variables, and some problems with those approaches. I will then consider in some detail the problems encountered in efforts to measure the

components of restorative experiences specified in Attention Restoration Theory (ART), namely, being away, fascination, extent, and compatibility. Finally, I will discuss the need for analyses that more directly test claims about restorative process. By helping to address these issues, research in environmental psychology can contribute substantially to further progress in a research area of growing significance.

Educational assessment

HATTIE, J. (University of Auckland)

It has been 50 years since the origins of item response models and testing has greater benefited from these models. But so often we are using yesterday's technologies and ideas to solve tomorrow's problems. The use of tests has had a resurgence given the internet and now m-technologies and the need for different measuring models built on our past successes is needed. In schools and organisation there are exciting developments in using high quality tests in formative decision making, with the aim of changing the teachers in what they do than measuring student outcomes. The session will also outline some interactive testing technologies that can be used on the internet and m-technologies to more fully engage test takers in simulations.

**Research on asian students' motivation:
Themes and issues**

HAU, K.T. (The Chinese University of Hong Kong)

The study of Asian students' achievement motivation has been of great interest to researchers since the 90's. Two factors have contributed to the proliferation of research in this area. On the one hand, the outstanding academic performance of certain groups of Asian students, despite their apparently less favorable learning conditions, has aroused interest in investigating the characteristics of learning and teaching in Asian contexts as well as the factors behind their success. On the other hand, psychological research has increasingly emphasized person-environment interactions as determinants of human behavior, accompanied by an increased interest in cross-cultural studies

where theories originated in Western contexts are examined in other cultures. Studies of this kind often help to refine and expand existing theories. This paper begins by highlighting the outstanding educational performance of specific Asian groups sharing the Confucian cultural heritage. Major themes associated with this cultural context, including collectivism, the virtue orientation in learning and the high regard for educational achievement, are briefly discussed to provide a background for understanding research findings in this area. Studies and issues related to the examination of achievement goals, beliefs and interests as well as intrinsic motivation are described. Useful insights generated from these studies include the complexity of cultural differentiation, the effects of acculturation, the need for more refined instrumentation and research design, as well as the benefits of including a wider range of motivation-related constructs and outcome measures in future studies. Despite mixed findings and methodological problems associated with cross-cultural research, previous studies have largely shown that students in the Asian-Confucian cultural context display motivational characteristics that are different from those of their Western counterparts. However, much research is needed to provide more accurate delineations of and explanations for these divergent patterns.

Pitfalls and successes in creating a new testing environment in an east-european culture

ILIESCU, D. (SNSPA Bucharest)

Professional efforts to create, adapt and publish psychological tests in Romania, as in the whole area of South-Eastern Europe, have had a visible revival in the last decade, after a sad history of 20 years when Romanian psychology was banned as an academic discipline by the communist regime. The historical context of test use in Romania is of great importance when discussing current practices in test development and usage. Historical efforts (during the communist regime) to restrict psychology and its technology continue to live on in both professional and everyday attitudes towards tests and testing and are most visible in the lack of understanding of ethics associated with test

use in Romania. Also, even though Russian influence is not longer of importance, the geographical and historical proximity to the USSR has shaped some of the practices and attitudes underlying testing practices in Romania even today. We will discuss the pitfalls and successes experienced during the last decade by the new spirit of test usage, development, adaptation and publishing in Romania. We will address issues in three different areas: (a) the local professional climate and its influence on testing practices, including efforts to accelerate ethical testing practices, the development of a local set of guidelines for selecting tests for adaptation, (b) procedural aspects of contacting and obtaining permission from test publishers and authors, test marketing and sales, cooperative agreements with other companies, niches in the local market, the general approach to expansion in the regional market, and (c) scientific practices in data collection and analysis, ongoing validation research, and the usage of longitudinal samples. Appropriate attention will be given to multicultural aspects, important due to Romania's multi-ethnic population, as well as to the analysis of similarities with other SEE countries.

Aging and the effects of emotion on cognition: Implications for psychological interventions for depression and anxiety

KNIGHT, B. (University of Southern California)

The address will discuss developments in theory and research regarding emotion and aging, including Socioemotional Selectivity Theory and the positivity effect in emotion and aging. Then, recent work on age effects on mood congruence and sad mood and on attentional bias to threat and anxiety will be presented that raise questions about increased sensitivity to changes in mood even though overall mood may improve with age. The implication of these findings for adapting cognitive behavior therapies for work with older adults will be explored.

Colleagues as a defence against bad science: Gentle alternatives to whistle blowing

KOOCHER, G. (Simmons College)

Abstract not available at time of publication

The relevance and viability of subconscious goals in the workplace

LATHAM, G. (University of Toronto)

This presentation examines the relevance and viability of pursuing empirical research on subconscious goals and applying the findings in the workplace. Five topics are addressed. First, reasons why management scholars have eschewed the study of the subconscious are given. Second, a brief overview of social psychology experiments on subconscious goals is provided. Critical issues that have yet to be addressed in these experiments are identified and discussed. Third, organizational psychology experiments on subconscious goals that have attempted to overcome several of these shortcomings and provide new findings are described. Fourth, research avenues that have yet to be explored are suggested. Finally, the implications of this stream for management practice are discussed.

Self-efficacy combined with social and cognitive predictors

LUSZCZYNSKA, A. (Warsaw School of Social Sciences and Humanities, and University of Colorado)

The paper discusses the processes by which self-efficacy may affect health (and health behaviors) indirectly, interacting with (or mediating) other cognitions (e.g., metacognition, action plans formation). Examples of indirect effects of self-efficacy will be drawn from studies involving adolescents, healthy adults, patients with cardiovascular diseases, HIV, general anxiety disorder, and caregivers of individuals with Huntington disease. Randomized controlled trials suggest that adding self-efficacy to a training of self-regulatory skills increases the sustainability of the effects over time. Further, a line of research involving trauma survivors (including domestic violence, military personnel deployed to Afghanistan or Iraq, breast cancer patients, and police force personnel) shows that selected cognitions interact with self-efficacy and these interactions promote posttraumatic adaptation. Discussed examples will include the

relationships between self-efficacy, peritraumatic dissociation, posttraumatic growth and posttraumatic social support and their effects on cortisol levels, quality of life, substance use, anxiety, and depression.

The role of self-concept in educational psychology: A methodological-substantive research programme

MARSH, H. (Oxford University)

My self-concept research programme represents a substantive-quantitative synergy, applying and developing new quantitative approaches to better address substantive issues with important policy implications. Self-concept enhancement is a major goal in many fields including education, child development, health, sport/exercise sciences, social services, organisational settings, and management. Self-concept is a multidimensional hierarchical construct with highly differentiated components such as academic, social, physical and emotional self-concepts in addition to a global self-concept component. Self-concept is also an important mediating factor that facilitates the attainment of other desirable outcomes. In education, for example, a positive academic self-concept is both a highly desirable goal and a means of facilitating subsequent academic accomplishments. However, the benefits of feeling positively about oneself in relation to choice, planning, persistence and subsequent accomplishments, transcend traditional disciplinary and cultural barriers. My purpose here is to provide an overview of my self-concept research in which I address diverse theoretical and methodological issues with practical implications for research, policy and practice such as: Does a positive self-concept 'cause' better school performance or is it the other way around? Why do self-concepts decline for gifted students who attend selective schools, and learning disabled students in regular classrooms? Are multiple dimensions of self-concept more distinct than multiple intelligences? Why do people think of themselves as 'math' persons or 'verbal' persons? Can children as young as 5 or 6 distinguish between multiple dimensions of self-concept? How different are the self-concepts of bullies and victims? Does a positive physical self-

concept lead to health-related physical activity? Do self-concept models hold up cross-nationally and cross-culturally? How do self-concepts of elite swimmers from 30 countries contribute to winning gold medals? How did the fall of the Berlin Wall and the resumption of Chinese control of Hong Kong influence self-concepts?

Reappraising the transactional model of driver stress and fatigue

MATTHEWS, G. (University of Cincinnati)

The transactional model of driver stress and fatigue proposes that affective responses to vehicle operation depend critically on the driver's appraisal of the demands of the traffic environment, and on choice of coping strategy. In this talk, I will provide an overview of four lines of research that broadly support the transactional perspective, but which also raise some issues for future research. First, there is now extensive evidence from psychometric studies that multiple dimensions of stress vulnerability may be reliably assessed, using the Driver Stress Inventory (DSI). The scales of the DSI appear to be valid for both professional and non-professional drivers. They are also fairly, though not entirely, robust across different cultures. Second, recent research confirms the key role of appraisal processes in shaping the experience of driver stress and fatigue. I will review findings from recent simulator studies of fatigue that identify challenge appraisal as a central process. Third, cognitive stress processes influence not only subjective experience but also performance and safety. Anger-prone and anxiety-prone drivers show different patterns of vulnerability to impairment, although emotional responses may not be directly connected to behavioral responses. Recent studies of fatigue show that erosion of the driver's readiness to commit effort to the task may be especially damaging to alertness. Fourth, I will review the human factors implications of recent research. While the introduction of in-vehicle systems to aid the driver may reduce workload, such devices may be ineffective in reducing stress, and may promote a dangerously passive task strategy. On a more positive note, neuroergonomic approaches may enhance evaluations of the driver's alertness. A new psychophysiological technique, measurement of

cerebral bloodflow velocity using transcranial doppler sonography, may provide a means for tracking the loss of task engagement typical of fatigue. I will conclude by considering some challenges for the transactional approach; discriminating driver stress from other sources of stress including occupational stress, establishing the causal role of emotional responses, and the possibility of 'implicit' unconscious elements of the stress response.

Psychotherapy relationships that work: Evidence-based practices

NORCROSS, J. (University of Scranton)

What really works in psychotherapy? Decades of clinical experience and controlled research consistently document that the therapy relationship accounts for as much psychotherapy success as the treatment method. This invited address will present the results of multiple meta-analyses, compiled by a joint task force of the APA Society of Clinical Psychology and the APA Division of Psychotherapy, on (1) effective elements of the therapy relationship, (2) effective means of tailoring that relationship to the individual patient, and (3) discredited or ineffective relationship behaviors. The talk synthesizes two of the most crucial developments in contemporary mental health: evidence-based practices and therapeutic relationships. At the conclusion of the address, participants will be able to: (1) identify at least 3 therapist relational behaviors that demonstrably improve the effectiveness of psychotherapy with children, adolescents, and adults; (2) use at least 3 evidence-based methods to tailor the therapy relationship to the individual client in ways that enhance treatment outcome; and (3) apply the percentage of outcome variance attributable to various clinician, patient, and interactional factors.

Displaying ethical behaviors by psychologists when standards are unclear

OAKLAND, T. (University of Florida)

Psychologists recognize the need to know and adhere to the ethics code in the country or

countries in which they work. However, most countries do not have ethics codes that govern the work of psychologists. Thus, psychologists working in countries that do not have an ethics code face a dilemma: they need to behave ethically yet do not know the guidelines or standards that govern these behaviors. This presentation highlights some cross-national conditions about which psychologists should be aware when working cross-nationally, especially in countries that may lack an ethics code. These include knowledge of the host country's prevailing moral values, its laws and administrative policies, and ethics codes as well as policies approved by international agencies and associations. Eight guidelines are provided for psychologists working in host countries that lack ethics codes.

Having a sense of one's place: Challenges of identifying and nurturing social and environmental community affordances

PRETTY, G. (University of Southern Queensland)

This paper demonstrates how an understanding of people's relationships with the physical spaces they occupy as home and community can contribute to our practice at individual, social and environmental levels. Community psychology suggests how a social residential community can influence the ability of its people to thrive and sustain cultural vitality with concepts such as sense of community and belonging. Similarly environmental psychology informs the understanding of the physical context of the residential community. Concepts such as sense of place, place identity and attachment suggest how spaces become places which afford inhabitants opportunities for biopsychosocial development and well being. This paper weaves these theoretical threads of community, environmental and ecological psychology and its research to describe processes by which people attribute meaning to their physical surroundings and subsequently symbolically represent them as home and community. Methods are presented for observing this fabric as a source and site for consultation regarding current individual, social and environmental challenges. Social justice issues embedded in current inequities of environmental affordances are considered from

the experiences of adolescents, indigenous peoples, and rural and immigrant communities.

A psychological perspective on 'thinking globally and acting locally' in the context of climate change: Environmental wisdom amidst complexity, disconnects, and crucial omissions

RESER, J. (Griffith University)

The paper examines a current mantra and conventional wisdom expression with respect to the interrelated challenges of environmental degradation and climate change, to illustrate that a crucial missing piece in interdisciplinary work on climate change is that of highly relevant psychological analyses and research findings. The paper explains the nature, logic, and findings of that research which has examined environmental hyperopia, a convergent set of perceptual, media coverage, and information technology biases which selectively distorts risk perception of both local and global environmental threats and impacts. These findings and insights are then discussed in the context of a running discussion within environmental and social psychology concerning the current strategic privileging of Environmentally Significant Behaviour (ESB) change over Psychologically Significant Responding (PSR). The larger framing of current climate change discourse in terms of climate change mitigation and adaptation is then briefly canvassed, with the case made that from a psychological perspective these two processes have strong interlinkages, and that the nature, mediating roles, and importance of psychological adaptation have been almost wholly missed in current research and policy discussions on climate change adaptation. The paper concludes with the assertion that 'thinking globally, acting locally, and responding personally' are indeed prerequisites for sustainable, life supporting – and life enhancing - local and global ecosystems, but that the complexity of 'climate change', human nature, and contemporary information and communication technology 'environments' must be factored into climate change and sustainability science and policy considerations.

New avenues for W&O Psychology

ROE, R.A. (Maastricht University)

This lecture argues that W&O psychology needs to broaden its scope and address issues that have been understudied in the past. It explores four possible avenues. The first avenue focuses on the temporal dimension of behavioral and organizational phenomena, and aims to complement knowledge about “what is” with knowledge about “what happens”. This implies building time into models and theories, gathering time-series data, and analyzing these with methods for determining intra-subject developmental trajectories and their interrelationships. The second avenue complements the study of people as individuals with the study of people as collectives. It builds on the acknowledgment that there is always a collective dimension to human behavior, and that the individual approach sometimes fails to provide satisfactory explanations, e.g. of irrational and destructive behaviors. Distinguishing between forms of collective behavior, it proposes to study them empirically with means other than the customary questionnaire and experiment. The third avenue deals with how context shapes and influences people’s behavior. Rather than conceiving context in terms of distinct variables, it looks at contextual profiles, as present in “theaters” such as the office, the church, the battlefield. It differentiates between various “theaters” and studies the behaviors that normally emerge and their unfolding over time. The fourth avenue is about morality; it emphasizes that organizations produce “goods” as well as “bads”. Instead of depicting organizations as “neutral” functional entities, it acknowledges that they can become bodies of exploitation and repression, which damage their social and physical environment. It seeks to explain the origins of “goods” and “bads” (e.g. incidents and scandals) and to establish what can be done about it. Each of these avenues can contribute to innovation in W&O Psychology, calling for new theoretical approaches and research methods, but also promising new insights and more effective interventions.

Health behaviour change: Mediators and moderators

SCHWARZER, R. (Freie University of Berlin and York University)

Health-compromising behaviors such as physical inactivity and poor dietary habits are difficult to change. Most social-cognitive theories assume that an individual’s intention to change is the best direct predictor of actual change. But people often do not behave in accordance with their intentions. This discrepancy between intention and behaviour is due to several reasons. For example, unforeseen barriers could emerge, or people might give in to temptations. Therefore, intention needs to be supplemented by other, more proximal factors that might compromise or facilitate the translation of intentions into action. Some of these postintentional factors have been identified, such as perceived self-efficacy and strategic planning. They help to bridge the intention-behavior gap. The Health Action Process Approach (HAPA) suggests a distinction between (a) preintentional motivation processes that lead to a behavioral intention, and (b) postintentional volition processes that lead to the actual health behavior. In this address, seven studies are reported that examine the role of volitional mediators in the initiation and adherence to five health behaviors: physical exercise, breast self-examination, seat belt use, dietary behaviors, and dental flossing. The general aim is to examine the applicability of the HAPA and its universality by replicating it across different health behaviors, based on various measures, time spans, and samples from different countries.

A psychological perspective on sustainable transport

STEG, L. (University of Groningen)

Many believe that changes in travel behaviour, in particular reductions in car use, are needed to reach a sustainable transportation system. In this presentation, I will discuss how traffic psychologists can contribute to achieving sustainable transportation by changing individual travel behaviour. I argue that traffic

psychologists should address three issues to promote sustainable transportation. First, it is important to identify factors underlying travel behaviour, as transport policies will be more effective if they target important antecedents of the relevant behaviour. Second, traffic psychologists should study which interventions will be effective and acceptable to change travel behaviour and to promote sustainable transportation, including informational and structural strategies. Third, it should be studied to what extent interventions affect individual quality of life, as an environmentally sound transport system can only be considered to be sustainable when individual quality of life is secured. I will present results from studies conducted at the University of Groningen that address these three issues. Moreover, I will provide recommendations for future studies, and suggestions on how to achieve a sustainable transport system.

Driver behaviour theory: ninety years of psychological space in traffic

SUMMALA, H. (University of Helsinki)

With experience, car drivers learn to manage with risks on the road surprisingly well. But what are the critical measures that the drivers actually control while driving? Plenty of candidates have been presented by psychologists who often are eager to explain behaviour with one or few variables: attention, comfort, crash-risk itself, feeling of risk, effort, mental workload, task difficulty, and so on. This presentation follows one line of theorizing that dates back to the late 1910's - that of psychological space. Ninety years ago a Swedish engineer Chr. Sylwan looked down at busy street traffic from a skyscraper in New York and described the space required by vehicles and the psychological space in front of and on both sides of vehicles, as determined by speed and anticipated paths of traffic units. Twenty years later Gibson and Crooks in their now well-known work vividly described the field of safe travel, the field of possible paths which the car may take unimpeded. Another thirty-five years later we investigated safety margins in space and time as important roles in our motivational model of driver behaviour. The "zero-risk theory" essentially suggested that the driver tends to satisfy his (excitatory kind of)

motives in traffic but so that he/she feels no risk. It postulated a risk monitor that alerts and triggers an avoidant reaction when a safety margin threshold is violated or violation is anticipated. Safety margins and elicited emotional reactions were suggested to serve as simple heuristics in dynamic driver behaviour just as optimising subjective utility models have been substituted by the satisficing principle and simple decision heuristics in more static decision making. This was in line with Antonio Damasio's hypothesis, now achieving increasing interest among driver behaviour theorists. Road space allocation and safety margin control are now an essential goal in the intelligent vehicle and road concepts. However, we suspect that many years from now drivers will utilise the control loop which maintains safety margins, that is, keeping themselves within a safe "psychological space", or "safety zone", or "safety envelope" - through speed, steering, and attention control. This old concept will be put into the context of the present motivational and cognitive models of driving behaviour.

On the role of passion for sport and physical activity in a fulfilling life

VALLERAND, R.J. (Université du Québec à Montréal)

Recently, Vallerand and his colleagues (2003) have proposed a new conceptualization of passion. Passion is defined as a strong inclination or desire for a self-defining activity that we love, value, and spend a considerable amount of time on. Two types of passion are proposed: a harmonious and an obsessive passion. Obsessive passion is involved when people feel that they can't help themselves and have to surrender to their desire to engage in the passionate activity. It is as if the activity controlled the person. Obsessive passion results from a controlled internalization (Deci & Ryan, 2000) of the activity in the person's identity. On the other hand, harmonious passion refers to a strong inclination for the activity that nevertheless remains under the person's control. The person can choose when to and when not to engage in the activity, thus preventing conflict from arising between activity engagement in the passionate activity and other life activities. Harmonious passion results from an autonomous internalization of the activity in

identity. In this address, I review research that reveals that harmonious passion toward sport and physical activity is typically associated with adaptive outcomes while obsessive passion is related to less adaptive and at times maladaptive outcomes. These findings have been obtained with respect to a number of affective, cognitive, mental and physical health, relationships, and performance variables with diverse populations. I also address the role of personality and social variables in the development of passion. Finally, some directions for future research are proposed.

Cross-cultural assessment: The next generation

VAN DE VIJVER, F. (Tilburg University)

It is argued that adequate cross-cultural assessment is based on a productive synthesis of cultural and substantive considerations on the one hand and appropriate methods (design and statistical procedures) on the other hand. Many applications of test adaptations pay considerably more attention to one aspect than to the other. However, there is a new generation of test adaptations emerging in which an extensive conceptual analysis of the target construct and cultures is combined with adequate statistical procedures. Examples can be found in large-scale survey projects where a multicultural and multilingual team prepares a source version that can be translated in all target languages. Examples are large-scale international research projects such as the International Social Survey Programme and the European Social Survey. Other examples come from indigenous studies where results are linked to the international literature so as to establish shared and unique aspects of the target instrument. A final example comes from assessment on a global market. All these applications share the issue of assessing in a context where the notion of a fixed reference group, the basis of bias and equivalence techniques, is no longer useful. Issues arising in this emerging framework for psychological assessment are described.

Abstracts of the 27th International Congress of Applied Psychology

Invited Keynotes

The shared principles that reflect the professional morality of psychologists

ALLAN, A. (Edith Cowan University)

Beauchamp and Childress (2009) submit that most learned professions have, at least implicitly, a professional morality that reflects a view shared by the majority, but not necessarily all, of the members of the relevant profession. The aim of the study of which the results are reported here, was to determine what the shared morality of psychologists is. To do this I undertook a content analysis of seminal publications on ethics by psychologists and nine codes of ethics of psychological professional and regulatory bodies. The review of the literature identified ten possible shared principles, but these were reduced to eight principles after the review of the codes, namely: Respect; Autonomy; Non-maleficence; Beneficence; Justice; Veracity; Fidelity and Responsibility. These eight principles could arguably be collapsed into a smaller number of overarching principles and the nomenclature used by different authors and drafters of codes differ, but it appears that psychologists accept this set of eight shared principles. I will briefly examine each of these principles, discuss the resolution of conflicts between them, and possible future developments.

Talking race and prejudice 'down under'

AUGOUSTINOS, M. (University of Adelaide)

Despite claims that we are moving towards a 'post-racial' world, race and prejudice continue to be intractable problems both nationally and internationally. Psychology and more specifically, social psychology, has concerned itself with this social issue at least since the 1940s, developing a wide range of theoretical approaches and applied real world interventions to help ameliorate this social scourge. This keynote address reflects on a relatively new theoretical framework for understanding prejudice and racism – discursive psychology - and the potential for developing anti-racist interventions on a larger scale based on this tradition of research. More specifically this paper will examine a body of research which has

mapped debates over 'race' in Australia since 1995 just prior to the emergence of One Nation. This has included examining both everyday talk and political rhetoric on issues such as racism, Native Title, Reconciliation, apologising to the Stolen Generations and Australia's treatment of asylum seekers. It identifies a recurring set of discursive resources and rhetorical commonplaces that are typically used in both informal and political discourse to justify and legitimate inequalities and the oppression of marginalised groups in ways that disavow a racist or prejudice identity. Like studies conducted in other western democracies, these discursive resources are premised on the classic liberal tropes of freedom, individual rights, equality, and rationality. The implications of this 'liberal-practical' discourse for anti-racist work is examined. How we as psychologists can contribute in practical ways to combat everyday prejudice and racism is also discussed.

Psychological treatment of co-existing affective and anxiety disorders and alcohol use problems

BAKER, A. (University of Newcastle)

Affective and anxiety disorders and alcohol use problems often co-exist, presenting challenging treatment issues for drug and alcohol and mental health clinicians. This presentation reports on the results of a systematic review of randomised controlled trials of psychological treatments for these co-existing conditions. In doing so, it describes in detail two recent randomised controlled trials evaluating CBT for co-existing depression and alcohol problems: the SHADE (Self-Help for Alcohol/other drug use and DEpression) and the DAISI (Depression and Alcohol Integrated versus Single-focussed Interventions) projects. These studies represent the first large randomised controlled trials of CBT for co-existing depression and alcohol use problems. The SHADE project compared 10 sessions of therapist delivered and computer delivered CBT with 10 sessions of person-centred therapy. The DAISI project compared integrated (depression and alcohol) with single focussed (depression versus alcohol) interventions and a brief intervention. This presentation describes the posttreatment and follow-up results of both trials, focusing on

depression and alcohol outcomes. Based on these trials and a systematic review of the literature, recommendations for the assessment, monitoring and treatment of co-existing affective and anxiety disorders and alcohol use problems are made.

Family psychology and therapy: Advances in treatment of couples and families

BRAY, J. (Baylor College of Medicine)

Scientific study has advanced our understanding of couples and families and this research has facilitated the development of evidenced-based interventions. This paper will review recent advances in couple and family process research. Application of these findings to evidence-based practice will be discussed. In addition, this talk will review the status of current evidence-based couple and family therapies and discuss future areas for research in couple and family psychology and therapy. The learning objectives include: (1) Understanding current family process research and its application to couple and family therapy; and (2) Understanding current evidence-based couple and family therapies.

The biology of posttraumatic stress disorder: Implications for therapy

BRYANT, R. (University of New South Wales)

Recent biological models of posttraumatic stress have pointed to the importance of acute reactions in the genesis and maintenance of Post Traumatic Stress Disorder (PTSD). This presentation will review prevailing biological models of trauma response, with specific focus on fear conditioning models. There will be a review of empirical studies of biological markers of adaptive and maladaptive responses to trauma. These studies will include studies of heart rate, neuroimaging, and startle response. The review will then extend biological models to discuss factors that may predispose people to PTSD development and will review the relevant evidence. The review will address evidence concerning the role that neuroimaging evidence has in understanding the treatment of PTSD.

Possibilities of enhancing current psychotherapy approaches to PTSD by modulating neurotransmitters associated with learning will be discussed and findings from a range of anxiety disorders will be discussed.

Work and family: Can women leaders have both?

CHEUNG, F.M. (The Chinese University of Hong Kong)

Traditional gender stereotype prescribes women to choose either a successful career or a happy family. In their career advancement, women often face this additional barrier embedded in their gender role. Previous research on work-family balance is premised on this traditional stereotype. As more women with family responsibilities rise to the top of their careers, this dualistic choice need to be re-examined. Recent research on work-family interface has advanced models that include work-family enhancement, and the integration of work and family spheres. Studies of top women leaders have enriched the psychological literature on leadership and work-family interface, and reveal strategies that are useful in managing role boundaries and integrating competing demands in different but interdependent life domains. In my address, I will highlight our study of top women leaders in the U.S., China and Hong Kong who have family responsibilities and propose an alternative model of leadership development that includes the family sphere. The convergences and divergences in the experiences these women leaders from different sociocultural backgrounds illustrate the "culture of gender", and enrich our understanding of the interplay of personal attributes, processes, and environment in a complex model of leadership that includes work and family among women in diverse global contexts. What we have learned from these recent psychological studies can help both women and men lead a dually successful life.

Love, eye contact and the developmental origins of empathy versus psychopathy

DADDS, M.R. (University of New South Wales)

What processes lie at the origins of our most positive and deplorable human traits: empathy and psychopathy? This talk will present research into clinical practice with young children with extremes of aggression and antisocial behaviour. We will cover findings from the neurosciences into the origins of empathy, especially emotion processing and how it interacts with parenting, to determine pathways into the development of empathy versus psychopathy. Recent findings on eye contact between children and their caregivers, and how this may lie at the heart of emotional health will be reviewed. The discussion will finally focus on parenting for emotional health and how these findings might inform the practice of clinical child psychology.

Couple relationships: From evolution to culture, from theory through research and to interventions

DIAZ-LOVING, R. (National Autonomous University of Mexico)

A profound interest in the expectations, perceptions, constructions, behaviors and reactions to the general functioning of couples has long occupied thinkers and scientists. Stemming from their inquiries, scientists have been able to create a complex, and on occasions even coherent, depiction of intimate relations (e.g. Fromm, 1955; Harlow & Harlow, 1965; Levinger, 1965; Bowlby, 1969; Rubin, 1973; Berscheid & Walster, 1978; Sternberg, 1986; Aron, Aron & Smollan, 1992; Duck, 1997; Perlman, 2000, Diaz Loving, 2008). However, in order to make sense of the growing amount of research findings, an integrative approach which includes biological, cultural, social, historical, psychological, ecosystem and behavioral variables must be considered (Diaz Loving & Sanchez-Aragon, 2002). Once the bio-psycho-socio-cultural model and general theoretical support for each component is presented, the increased incidence of lack of fulfillment, divorce and violence has impacted on the need of creating widespread interventions to improve couple relationships. Added to the equation are recent migratory and acculturation processes that impact on traditional norms, values and behavioral patterns, making the fit of programs based on research with samples of white middle

class couples ineffective for other populations. Specifically, we will refer to the needs of 50 million Latinos living in the United States, by presenting modules which include culture, gender and communications issues to be considered in working with these groups.

An overview of Australian Aboriginal and Torres Strait Islander people and psychology

DUDGEON, P. (University of Western Australia)

This presentation will provide an overview of the history of Aboriginal and Torres Strait Islander peoples of Australia and contemporary issues related to mental health. This highlights Aboriginal peoples' resilience and struggle to claim equality and cultural recognition by providing a brief overview of pre-contact times, colonisation, resistance and adaptation to shifting government policies. The history of the discipline and practice of psychology with Australian Aboriginal and Torres Strait Islander people in relation to mental health will also be included. Psychology's key points of engagement with Aboriginal and Torres Strait Islander people will be examined and while it is acknowledged that the profession of psychology has been part of the colonising process through cultural and institutionalised racism, there is reason for optimism in current times. The potential for empowerment and inclusion of Aboriginal and Torres Strait Islander peoples at all levels of mental health service provision is at hand. This brief overview concludes with some important milestones in psychology and Aboriginal and Torres Strait Islander mental health, pointing to positive ways that psychologists can work together to bring about improved social, emotional and spiritual wellbeing for Indigenous Australians.

The many applications of Positive Psychology

FOWLER, R. (University of California)

This address will present the areas of application and modes of training that have developed in the field of Positive Psychology. Positive Psychology, launched in 1988 by Martin

Seligman, has built a strong research foundation on which to base applications. At this time there are several programs in the United States and other countries that offer a masters degree in applied positive psychology and one, in California, that offers a PhD. Currently, the principal area of application are: Positive Mental Health; Positive Education; Positive Organizations; Positive Mental Health; Positive Health and Positive Neuroscience, as well as a program to develop resilience in military personnel. Examples of activities in each of the areas of application will be presented to demonstrate that Positive Psychology is now being applied in many areas of psychology.

Perfectionism

FROST, R. (Smith College)

Theories of perfectionism and its role in psychopathology have flourished for over 100 years. During the last 20 years this theorizing has been supported by empirical research on the nature of perfectionism and its relationship to psychopathology. Perfectionism has been implicated as an important feature of numerous anxiety disorders, depression, eating disorders, and more. It has been found to be associated with increased co-morbidity and even mortality. Modern conceptualizations of perfectionism emphasize the distinction between maladaptive evaluative concerns and high personal standards. This keynote will review evidence related to these dimensions of perfectionism and their relationship to psychopathology. Special emphasis will be given to recent research on the mechanisms that may be responsible for the relationship.

Psychology practice: Design for tomorrow

GOODHEART, C. (American Psychological Association)

This presentation gives an overview of how psychology practice is evolving in the United States and the elements that we expect to produce the greatest impact on healthcare service delivery and quality of care. Important drivers of change for practice include economics,

changing demographics, and advances in science and technology. Within that large context, everyday practice is being affected by ongoing national and international efforts which will be discussed. These include evidence-based practice definitions and resources, outcomes measurement frameworks, treatment guidelines, integrated health care, and the revision of the World Health Organization ICD-10 section on Mental and Behavioral Disorders with a focus on improved clinical utility.

A love for life: Helping couples realise their relationship aspirations

HALFORD, K. (University of Queensland)

Most adults aspire to sustain a stable mutually satisfying relationship with a spouse, and when that aspiration is realized the spouses and their children live healthier, more rewarding lives than in the absence of such a relationship. However, a range of social, personal and couple factors make the realization of relationship aspirations difficult for many couples to achieve. In this address I review the most important influences on couple relationship satisfaction and stability, and evaluate evidence on the effects of psychological interventions that aim to enhance couple relationship satisfaction and stability. There is clear evidence that we can identify couples at risk for deteriorating couple relationships, and brief psycho-educational programs can assist these high risk couples to sustain mutually satisfying relationship. The application of informational technologies holds the promise of making such programs easy to access.

Leadership: Lessons from organisational psychology

HESKETH, B. (University of Western Sydney)

First the presentation will highlight current and potential contributions from the field of organisational psychology to the development of leadership as an area of research and practice. This will include a brief historical perspective, but with the major focus on contemporary theory and research into leadership. Second, the presentation will focus on ways in which

leadership research and practice can be taken forward by drawing on a broader range of concepts and approaches from the field of organizational psychology and associated areas such as applied cognitive psychology and social psychology. Examples will include the role of skill development and domain expertise, pro-activity, emotional and physical resilience, social support, personality and adaptive performance. Finally, an adaptive P-E Fit approach to leadership will be outlined, and illustrated with examples from leadership and management challenges in higher education, health and industry generally. A leadership lifecycle framework will be proposed to provide a structure that can highlight the manner in which generic leadership capabilities, domain specific knowledge and skill, and situational requirements interact to affect leadership behaviour. Ideas for future research incorporating a longitudinal focus will be outlined.

The impact of culture for counselling

KELLER, H. (University of Osnabrueck)

Transition to parenthood has become a growing concern from a public health perspective in many Western societies. The low fertility rates lead to the fact that the first contact with a baby is with the first - and often last - child. Parenthood comes at a relatively late age in a life that has been settled without children. Accordingly insecurities are high and adaptational problems between parents and child increase. As a consequence of the needs of young families, many programs have been introduced that accompany the transition to parenthood and the adaptation between parents and children. However, the problems that young families face in Western societies during the transition to parenthood, may have been different depending on the economic and social support available, the level of formal schooling, and other variables. Most programs, however, are informed by the conception of the self as an autonomous agent, which is most representative of well situated, highly formally educated middle class families. In this presentation I will argue that different cultural models of men have to be taken into account in order to meet the needs of many families. An ecocultural model of development will be

presented with consequences for a cultural sensitive counseling process.

Psychology: Portrait of a discipline and a profession

KNOWLES, M. (Monash University)

This paper is written for two audiences. One includes those whose work is highly specialised and who are interested in a synopsis of the field of psychology as a whole. The other includes those on the threshold of their careers who are yet to decide in which direction the future will take them. For these purposes the paper examines the nature and origins of psychological thought, the formation of its scholarly and scientific traditions, the rise of applied psychology to deal with opportunities and demands generated by societal and national development, and the establishment of psychology as a profession. In other words, in contrast to the frequently discussed differences between pure and applied psychology this paper examines the three-way distinction which can be made between experimental, applied and professional psychology and discusses the distinguishing characteristics of each. It then considers several of the major challenges facing contemporary psychology. For example, one is the way the three different orientations just described have led to a fragmentation of psychology and what countervailing measures have been taken to foster the cohesion and integration of psychology. Another is the lack of awareness among the general public, business and community leaders, and politicians of the many achievements of psychology, and in light of this absence of knowledge and understanding what psychologists need to do to make the value of the full discipline of psychology more clear to the public in general and government officials in particular, especially as a basis for policy-making.

Evaluation of a cognitive behavioral group therapy for sexually abused girls

KOLLER, S. (UFRGS)

The aim of this presentation is to present a cognitive behavioral group therapy model among female children and adolescents victims

of sexual abuse. To evaluate the impact of this intervention by measuring over time the effects for those who participated in groups right after the event of sexual abuse and those who were on the waiting list for more than six months. A non-randomized study with intragroup comparisons over time was carried out. Psychological instruments were applied to investigate symptoms of anxiety, depression, post-traumatic stress disorder, beliefs and perception of the abuse experience before, during and after the intervention. Two follow-ups were performed after 6 and 12 months. Female children and teenagers from 9 to 16 years of age (N=49; Mean age=11.43; SD= 1.81) were clinically assessed in individual sessions. The cases were sent to the group by official institutions. The cognitive behavioral group therapy comprised 16 semi-structured sessions. The results were analyzed through statistical tests for repeated measures. The results of the pretest between the groups that received group psychotherapy immediately after the sexual abuse was reported and those who were waiting for psychological support showed that they do present differences on the reduction of the symptom. The assessment of the impact of the intervention revealed that cognitive behavioral group therapy significantly reduced symptoms of depression, anxiety, stress and post-traumatic stress disorder for all participants. In addition, the intervention enabled the participants to modify beliefs of guilt, low degrees of trust and credibility, and was effective in reducing psychological symptoms and changing distorted beliefs and perception in regard to the abuse. Cognitive behavioral group therapy was effective in reducing psychological symptoms in sexually abused girls.

Solving global health problems through applied psychology: Current models and methods and how you can be involved

KURIANSKY, J. (International Association of Applied Psychology)

People around the world face serious problems affecting health like poverty, AIDS, mental health disorders, human rights violations, lack of education, and the threat of nuclear war, climate change, and natural as well as man-

made disasters. This presentation covers unique models and methods that are being used by applied psychologists to tackle these major issues, as well as practical steps ICAP attendees can take to be involved in such international projects or to develop their own projects. Principles and practical steps will illustrate how to create partnerships among psychological researchers, practitioners and organizations, and multi-stakeholder projects which bring together NGOs, governments, civil society, and the private and business sectors, as well as the United Nations and its agencies. Models include examples of both "top-down" and "bottom up" approaches starting from governments or grassroots, as well as cross-cutting cooperation and multi-partite participation. The models demonstrate approaches (1) to combat poverty and lack of education through the development of a community mental health and education center in Haiti; (2) to combat AIDS through psychosocial approaches in a camp for teen girls who are AIDS orphans in Lesotho Africa, and a program in Sierra Leone for youth health that mobilizes media, school and community resources; and (3) to overcome prejudice through grassroots peace building efforts between Israelis and Palestinians, and (4) to heal cultural wounds through Global Harmony events for Japanese-American cooperation. Methods include (1) how to access humanitarian aide; (2) specific steps for advocacy; (3) making commitments as demonstrated in the Clinton Global Initiative; and (4) how to work with the media and how to mobilize social media to create awareness and participation about campaigns, such as "We Must Disarm" "Seal the Deal" about climate change and the "Charter for Compassion." The presentation includes how to make one's expertise known, as well as how students can get involved in international psychology and learn about what IAAP psychologists are doing around the world. Handouts will be given about the topics, and videos will be shown demonstrating various international projects.

The self in obsessive-compulsive disorders

KYRIOS, M. (Swinburne University of Technology)

Cognitive-behavioral conceptualizations of Obsessive Compulsive Disorder (OCD) have led to effective treatments. Despite this, outcomes vary and dropout/relapse rates remain high. In fact, published studies have found that only around 40% of people with OCD who present for treatment actually recover or experience clinically significant change. In response, researchers have turned to: (i) identifying and targeting factors predictive of poorer outcomes; and (ii) developing novel treatment strategies based on new theoretical approaches. Our own theoretical and empirical work has identified a range of self-construals as being associated with poorer treatment outcomes and vulnerability to OCD. In particular, self-ambivalence, self-worth contingent on a narrow range of domains (i.e., morality, achievement, control, and perfectionism), and self-perceptions about the degree of importance and threats to perceived competence in those domains have all been found to be associated with OCD symptoms. This paper summarizes findings from the experimental and questionnaire-based research conducted by our group, and describes a range of strategies focusing on self and identity aimed at augmenting traditional cognitive and behavioral interventions for OCD.

Gambling

LADOUCEUR, R. (University Laval)

This presentation will focus on our current understanding of gambling behavior and the causes of pathological gambling. The main elements and components of an effective prevention program will be highlighted. Finally, we will discuss the issue of controlled rather than abstinence as the main treatment outcome.

Achievements of landmark government-funded psychological services in Australia

LITTLEFIELD, L. (Australian Psychological Society)

The Burden of Disease and Injury Study in Australia indicates that mental disorders constitute the leading cause of disability. Psychologists have long argued that the Australian population should have government-

funded access to psychological services for assessment and treatment of mental disorders. Almost all such funded services in the community are provided by the medical profession. A breakthrough occurred in 2001 when a Federal Government initiative called 'Better Outcomes in Mental Health Care' was introduced. Capped funding was provided to the Divisions of General Practice for GPs to allocate to patients to 'purchase' psychological services, with the aim of "improving community access to quality primary mental health care". The uptake of these services was such that demand far exceeded the supply of funding. Based on the success of this program, a new initiative, 'Better Access to Mental Health Care', was developed with the aim of "enabling people with diagnosed mental disorders to access assessment and psychological treatment". This initiative utilises Medicare rebates to fund psychological services for consumers on referral from general practitioners. Medicare-funded services provided by psychologists have been in unprecedented demand, with over 2 million Australians accessing more than 7.5 million services since the introduction of the initiative in November 2006. There has been extensive APS involvement in these initiatives since the beginning...30 years of advocacy finally paid off for the benefit of Australian consumers.

In this address, the achievements of the Better Outcomes and the Better Access initiatives will be described, along with the profile of the consumer uptake and the implications for psychologists. The future of government-funded psychological services in the community will be predicted as a complementary combination of these initiatives.

Applied psychology in the international context: What more needs to be done?

MARTIN, P. (Monash Medical Centre)

Psychology is a growth discipline and profession throughout the world. Psychology clearly can make a contribution to the major challenges facing the world and there are signs that this will be even more the case in the future. There are

indications that national psychology associations are becoming less insular and more international in their outlooks. This Address will consider five related questions: (i) Where has psychology contributed and where could it contribute more; (ii) What do different regions of the world contribute to the advancement of psychology, and what are the problems with the current situation; (iii) What organisations are contributing to international psychology and what do they do; (iv) What more could be done by international psychology organizations; and (v) How could international psychology organisations achieve more? Challenges for psychology include that it has been dominated by contributions from North America and Europe and there is a need for increasing contributions from other regions of the world. This is necessary from the perspective of making psychology a true science but also because this will assist psychology to meet global challenges. The application of psychology has tended to focus on certain areas, in particular health, but also children/education and testing/assessment; and more attention needs to be given to the big global issues. Governing bodies, both national and international, need to be persuaded to make their priorities/goals more orientated around the well being of individuals and the community. A number of international and regional psychology organisations have made important contributions since the first international psychology congress over 120 years ago. Perhaps after all these years it is time for a major review of the structure of these organisations individually and also with a view to whether there should be mergers or at least more collaboration. International psychology needs more resources if it is to achieve greater things, and this can be achieved via increasing subscriptions/dues and/or developing new income streams. Surely, with perhaps a million psychologists worldwide, it must be possible to raise a significant amount of annual revenue! International psychology needs to become more strategic and more sophisticated politically.

**An eclectic approach to psychology:
Realising the promise of the scientist-
practitioner model**

MONTGOMERY, B. (Australian Psychological Society)

Psychologists face an expanding marketplace of procedures for the application of psychological knowledge. We are exhorted to join a 'school' or hop onto the latest bandwagon. How do we choose, in the best interests of ourselves and our clients? Our choices, as indicated by success in the marketplace, suggest we tend to think like other humans, relying on illogical heuristics and influenced as much by emotional and social pressure as objective evidence. Usually inadequate and hence competitive research-funding promotes claims of newness and difference that don't bear close scrutiny. The complexity of human psychology requires a holistic approach and an ability to link seemingly disparate ideas. This is hindered by narrow teaching and one-size-fits-all claims. Reviews of schools of practice identified eclecticism as the most popular reported choice. However, this is often syncretism, an uncritical willingness to adopt any new idea regardless of its theoretical or research base. Applied science is hard work, sometimes counter-intuitive, requiring tolerance for ambiguity. Applied psychology requires a willingness to put the needs of the client ahead of personal satisfaction. Originally eclecticism involved an openness to new practices, based on their research support, and I propose a return to that. As well as the usual criteria for acceptable research evidence, I see as essential evidence for effectiveness - the ability to deliver a procedure to many of those who would benefit from it, under the circumstances likely to prevail - based on but going beyond efficacy. We need research with ecological validity. In light of the marked excess of need for versus availability of psychological services, we should engage in responsible sharing of established psychological knowledge and procedures with our colleagues in other professions and with our consumers.

A realistic interpretation of the scientist-practitioner model recognises that most psychologists are consumers of science rather than producers. An eclectic approach requires that we teach our students to be discerning, sceptical consumers, able to benefit from advances in our science to the benefit of their clients. This is realising the promise of the scientist-practitioner model.

Psychological approaches to bipolar disorder: Where to next?

MURRAY, G. (Swinburne University of Technology)

Bipolar disorder is a serious mood disorder which affects at least 1% of the population. Interest in psychological approaches to the disorder has increased exponentially over the past decade, and the aim of this talk is to provide a forward-looking update of contemporary investigations. Material will be organised around four topics: new perspectives on diagnosis and assessment, the current state of the treatment evidence base, the hunt for good psychological models and the importance of patient-centred research and practice. By proposing key questions in these domains, it is hoped the talk will inspire further psychological research and theorising, inform psychologists who work with this population, and encourage realistic optimism amongst people with bipolar disorder.

Evidence-based practice may start in the animal laboratory: Selected examples past and present

OVERMIER, J.B. (University of Minnesota)

Adolf Meyer argued for grounding psychiatry in fundamental researches on behavior. After brief review of foundational animal researches contributing to clinical practice, I will review several contemporary examples. Then, I will elaborate in some detail on one example, a relatively new instance from our laboratory called (infelicitously) the "differential outcomes effect". Applications to normal children, mentally retarded persons, language delayed children, memory impaired seniors, and even advanced school students will be presented. Finally, I will explore some future possibilities for applications of this methodology.

Ambulatory assessment: The methodological route into the domain of real-life behaviour

PAWLIK, K. (University of Hamburg)

Since the 1970s/1980s psychology has come of age, methodologically and theoretically, to transgress limiting boundaries of the laboratory and study human behavior and experience, actions and affects, and even psychophysiology, in a person's every-day life-course: at the workplace, at leisure, 'in the field'. To this end new instruments of assessment and study designs had to be developed, now referred to as "ambulatory assessment". They enable a researcher to investigate a psychological problem under conditions realistically representative for the processes under study. In this address different designs, technical implementations and psychometric standards of ambulatory assessment will be introduced, with examples of methodology, selected research findings, and reference to comprehensive literature. On a theoretical note, ambulatory assessment will be shown to open up a new third "discipline", viz. of eco-representational psychology, beyond the classical experimental and correlational (or clinical) "disciplines" distinguished by J.F. Dashiell (1939) and L.J. Cronbach (1958).

Building an evidence-based population level intervention system to promote competent parenting

RALPH, A. (University of Queensland)

Triple P-Positive Parenting Program has developed the capability of delivering large scale population-level parenting interventions building on over 30 years of applied international research. It comprises a tiered, multi-level approach incorporating media, community, primary care, school, mental health and workplace interventions to promote competent parenting and reduce coercive parenting and family conflict. The system aims to promote parental self regulation, thus improving self efficacy, self management skills, problem solving skills, and enables parents to become more self sufficient. The primary aim is to decrease the prevalence of externalising and internalising social, emotional and behaviour problems in children and adolescents by increasing the competence, knowledge and confidence of parents at a population level. Implications of the findings of selected research studies will be discussed. The paper will also discuss a series of

issues in the form of lessons learned from the practical application of the public health approach at a whole of population level, including issues associated with dissemination and training.

Theoretically-based developments in the treatment of social phobia

RAPEE, R. (Macquarie University)

Generalised social phobia is a chronic disorder that commonly begins in childhood or early adolescence and tends to continue across the lifespan. Social phobia has one of the lowest remission rates of any mental disorder. It produces moderate to severe impact in people's lives, affecting family, relationships, study, career, and medical problems. It is also commonly associated with other severe disorders such as depression and substance abuse. Empirically validated treatments for social phobia have been reasonably successful. The majority of empirically validated treatments centre around exposure in-vivo, often with additional cognitive restructuring. Several meta-analyses have reported that these comprehensive packages result in pre to post-treatment changes of around 0.8-1.0 sd on measures of social anxiety. Comparatively, social phobia has shown the smallest response to treatment of any anxiety disorder (Norton & Price, 2007). These findings suggest that improved techniques need to be developed for best practice management of social phobia. Arguably, these improvements should come from advances in theory. The current talk will describe three directions that we have attempted to take to increase effect sizes for the treatment of social phobia. The first direction comes from cognitive models of the maintenance of social phobia. These models have pointed to several factors that appear to play a central role in the maintenance of this disorder including a negative mental representation, subtle avoidance and safety strategies, and an inefficient focus of attention. Based on these suggestions it is predicted that incorporating strategies to target these mechanisms should improve effects. The results of a large-scale RCT will be described showing that a package that aims to modify these mechanisms produces a larger effect size change

than a traditional treatment package utilizing only exposure and cognitive restructuring. A second direction of research picks up on recent discoveries in the area of cognitive bias modification. Experimental research has shown that modifying automatic attentional biases toward threat among anxious individuals can reduce fears. We are near to completing a RCT in which attention re-training has been incorporated into our best practice treatment package and the results of this trial will be reported. Finally, a new direction of research has shown that enhancement of the effects of exposure can be produced chemically by ingesting medications that directly target the biochemical mechanisms of learning. Incorporation of these methods into treatment may provide an enhanced exposure effect and may signal a new paradigm in the management of anxiety disorders.

If you thought that was hard, try changing health care provider's clinical behaviour!

SANSON-FISHER, R. (University of Newcastle)

Psychology has much to offer in explaining and changing behaviour. Over the last few decades it has made an impressive and valuable contribution to assisting a wide variety of in need patient and other groups improve their well-being. While debate continues about the most acceptable and efficient way of assisting patient and community change our profession is only gradually coming to an acceptance that it has an important role to play in changing health care provider's behaviour. There is now substantive research indicating that there is an important and concerning level of evidence practice gap in many areas of clinical health care delivery. If this gap could be reduced there would be significant gains for a wide range of patient groups and possibly significant health cost savings. Psychology is well-positioned to make a positive contribution to this important endeavour. It has expertise in considering and evaluating methods of measuring clinical performance, understanding the reasons for the current failure to adopt best evidence medical practice, and in developing, implementing and evaluating strategies designed to reduce the disturbing evidence practice gap. This

presentation will focus on the ways in which psychologists could apply their skills in this field and in so doing, improving the well-being of many.

Redefining trauma and the treatment of disturbing life experiences

SHAPIRO, F. (EMDR Institute)

Research and clinical experience over the past twenty years have led to a reconceptualization of the term "trauma" to encompass far more than the "Criterion A" events traditionally used to diagnose PTSD. For instance, a large general population survey has reported that disturbing "life events" resulted in more PTSD symptoms than did major trauma. Further, research has indicated that while only a minority of trauma victims develops full-blown PTSD symptoms, the negative effects of these disturbing life experiences have important cognitive, affective, and somatic implications for intra- and interpersonal functioning throughout the lifespan, and appear to underlie a wide range of clinical complaints. These conditions can be independent of major traumatization, and stem directly from the disturbing life experiences that can define the person's sense of identity, negative beliefs, emotions, and behavior. The focused application of procedures to the memories of these experiences can result in a rapid remediation of symptoms, even in the case of previously intractable conditions such as chronic pain, deviant arousal, and insecure attachment. An integrated approach to both case conceptualization and evidence-based practice will be described that applies to both individual and social dysfunction. Research, including neurobiological findings and clinical reports, will be used to illustrate the effects of efficient treatment, including the ability to simultaneously alleviate personal suffering, help stop the cycle of violent or predatory behavior, and prevent the trans-generational transmission of pathology. The clinical implications for simple symptom reduction versus personal growth and resiliency will also be explored, and recommendations for future research proposed. A short treatment tape of a research participant with 1-year follow-up will demonstrate the interrelationship of memory, symptom patterns, and pronounced clinical effects.

Coping with demands of social change across the lifespan

SILBEREISEN, R. (University of Jena)

We live in times of rapid social and economic change, and many individuals experience challenging demands related to changes in the work place, in their family, and in public life. Examples in Germany refer to the need of great flexibility when searching for a job, of delaying commitments in partnerships, and of adjusting into a multicultural environment. Utilizing large samples of adults (16-43 years) from various parts of the country, we assessed the cumulated load of demands individuals have experienced over the last five years. Applying a complex model of action regulation vis-à-vis such challenges, individuals' ways of dealing with the demands were investigated as well as the personal and social resources at their disposal. We found that people with lower levels of education or occupational status and those from the East of the country experienced higher loads of change-related demands, particularly in the domain of work. Higher loads, in turn, corresponded to lower well-being and satisfaction with intimate partnerships and life in general, particularly if individuals were not able to actively deal with the demands. This general picture was qualified by influences from conditions of the economic and social context. People who lived in economically challenged areas of the country showed weaker associations between demand load and well-being, probably due to the fact that the common fate inoculated them from attributing the demands as personal failure. The model of action regulation was further used to replicate the results with a cohort of older adults (55-75 years), and to launch a cross-national comparison with Poland. Taken together the results demonstrate the multiple levels through which social change affects individuals. This is the basis for new research questions of importance for other countries and regions as well.

Are we close to being able to prevent depression and anxiety in young people?

SPENCE, S. (Griffith University)

Depression and anxiety are relatively prevalent mental health problems among children and adolescents. Although effective treatments are available, prevention of these disorders would save a good deal of suffering and cost in the longer term. This paper will discuss the status of current research relating to the prevention of anxiety and depression in young people. In particular, it will highlight the lessons that we have learned and the challenges we face in the development and implementation of preventive interventions with young people and their families. To date, most preventive interventions for young people have been implemented within school contexts. The paper will use research over the past decade conducted by the presenter and colleagues to illustrate current approaches to the prevention of depression and anxiety among children and adolescents. The results from a series of studies relating to the Problem Solving for Life Program and the beyondblue Schools project will be described. The relative benefits of universal versus targeted preventive approaches will be discussed, along with the need to develop ways to ensure fidelity of implementation of interventions in real world contexts. The paper will explore future directions for prevention research in this area and implications for mental health practitioners.

Applying CBT methods to OC spectrum disorders: The special case of hoarding

STEKETEE, G. (Boston University)

Compulsive hoarding is a relatively new topic of study in mental health and human services and currently has the singular disadvantage of being a behavioral and mental health problem without clear diagnostic criteria, although this seems very likely to change with the DSM V. Studying this problem has been difficult and sometimes backward, a not uncommon problem in research, as our theoretical models that inform interventions are inadequately tested while those in dire need of help cannot wait. Hoarding, in particular, challenges researchers on multiple fronts as so many disciplines and human service agencies are engaged in copying with and trying to resolve its myriad and sometimes crippling effects. With a somewhat complex CBT model undergirding treatment methods, clinicians must learn to utilize motivational interviewing,

cognitive skills training, cognitive therapy, behavioral practice methods for organizing, sorting removing clutter and not acquiring. This intervention package can be delivered in several modalities that include individual and group treatment, as well as online and web camera methods, with and without the aid of readings and in-home coaches. This lecture will examine the process and outcomes of these service delivery methods.

Constructing psychological science: Application and theory hand-in-hand

TRZESNIAK, P. (Escola Federal de Engenharia de Itajubá)

Science primarily focuses on survival and well-being of humanity. The very beginning of knowledge is how to do things in a more simple and/or better way. Even the formal and abstract mathematics had its days of practical, applied knowledge – like “selling two cows three times is equivalent to sell three cows two times”, or that “a right angle is built with three ropes with lengths three, four and five”. Today (2010), various emerging Sciences – accounting, nursing, psychology,

management – present a strong applied (professional) dimension, but their scientific counterpart is still in some – more or less - initial stage. We ask: can we accelerate emerging Sciences by looking at the more mature ones (physics, chemistry, and even mathematics)? We answer with yes - but not by just blindly transferring some quantitative methods. One has to look at the development (epistemology), and that is what the Japanese physicist Taketani (1911-2000) did for us. Taketani claimed that well-succeeded applied experiences are the key factor for constructing Science and that “non-immaculate” knowledge is a necessary step that must be accepted in the context. He proposed an “applied Philosophy” useful to develop new knowledge (instead of trying to prove that something is bad Science because it fails to explain one very particular situation). We will explain Taketani’s model and present an example from Psychology where its application improves the quantity of relevant scientific results compared to the efforts to achieve them.

Also inspired by Taketani's proposal, we will speculate on the future, suggesting three subjects to be in the mainstream of Psychological research in 2040.

The application of psychology to the prevention and treatment of eating disorders

WADE, T. (Flinders University)

Eating disorders are serious mental illnesses that carry a substantial harmful burden on both psychological and physical health. All-cause mortality rates are significantly elevated compared to non-affected individuals: Anorexia Nervosa (AN) is associated with the highest mortality rates of any psychiatric disorder and suicide standardized mortality rates are significantly elevated for Bulimia Nervosa (BN) and Eating Disorder Not Otherwise Specified (EDNOS), representing one of the highest rates across all psychiatric disorders. Eating disorders are also associated with the highest proportion of admissions of all psychiatric disorders, the longest median length of stay, and higher health care utilization than individuals with all other forms of mental illness. Additionally, Australian research shows that: (a) Individuals with eating disorders have significantly impaired social, vocational and educational functioning, as well as reduced productivity due to lengthy absences from work and school, and days out of role are significantly more frequent for people with eating disorders (19.8%) compared to those without (9.5%), (b) Between 15-24 years of age, BN and AN are the 8th and 10th leading causes of burden of disease respectively, (c) In South Australia from 1995-2005 there were over 2-fold increases in eating disorder behaviours. Overall, it is of critical importance to focus research on both the prevention and treatment of eating disorders. This talk will examine the state of research relating to these two endeavours, and will focus particularly on Australian research that has shown good potential in prevention and treatment.

Micro-macro dynamics of the cultural construction of reality: An institutional approach to culture

YAMAGISHI, T. (Hokkaido University)

Humans think, communicate, and behave to adapt to a particular social ecology, and by doing so they collectively create, maintain, and change the ecology (i.e., social niche) they adapt to. The institutional approach to culture analyzes culture as an institution, which is a self-sustaining system of shared beliefs. A set of shared beliefs make it possible for people who understand that the beliefs are shared by others to adjust their behavior to the anticipated responses from others. People who share the same set of beliefs thus induce each other to think and behave in particular ways by behaving in particular ways themselves. The best support to this approach is found when cultural differences in cognition and behavior that are regularly observed in everyday life disappears in a social vacuum – in a situation in which people are rid of any social concerns about implications of their behavior and can express their thoughts and behave free of any social concerns. Examples of such experimental manipulations will be presented and discussed.

Applied psychology as the functional contextualist views it

ZETTLE, R. (Wichita State University)

Several paradigmatic and philosophical perspectives are available to serve as a foundational base for applied psychology. Among these, functional contextualism seems most useful in adequately meeting the challenge of the human condition with sufficient scope, depth, and precision. The basic tenets, truth criterion, and root metaphor of functional contextualism will first be defined and contrasted with those of mechanism, which at least implicitly appears to be the dominant paradigmatic perspective within most of applied psychology. This will be followed by an overview of Relational Frame Theory (RFT) as a functional contextualistic account of language and cognition. Finally, research on the application of RFT through Acceptance and Commitment Therapy (ACT) and in work with developmentally delayed populations will be discussed and summarized.

Abstracts of the 27th International Congress of Applied Psychology

Workshops

Mindfulness training interventions in adolescents

ALLEN, N. (ORYGEN Research Centre), KNIGHT, W. (ORYGEN Research Centre)

Abstract not available at the time of printing

Preventative CBT based interventions

BARRETT, P. (University of Queensland), OJALA, K. (Pathways health and Research Centre)

Family-based clinical early interventions for children to promote resilience and well being and to prevent the onset of behavioural and emotional disorders are the future of both psychology and psychiatry. We now have evidence-based and proven-effective techniques that we can teach children, their parents, their siblings and their teachers to be happy and healthy and to stay that way throughout their development for very little cost. The FRIENDS for Life programs have been supported by the World Health Organization and cited in the Cochrane Library. The programs are currently used in 18 countries for the prevention of anxiety and depression in children, and for the promotion of social-emotional and positive coping skills across the lifespan. Whether your child is aged 4, 8 or 16, or is in fact an adult, we have programs that teach Cognitive Behavioural Therapy techniques to cope with stressful life situations and promote lifelong resilience that really work.

Suicide prevention in the elderly

BHAR, S. (Swinburne University of Technology)

This workshop describes cognitive behaviour therapy (CBT) for suicide prevention in older adults. The following aspects of the treatment are described: Assessing suicide risk, conceptualizing the problem through a cognitive behavioural framework, developing a safety plan, increasing hope and reasons for living, improving social resources, improving problem solving skills and efficacy, improving adherence to medical regimens, and relapse prevention. In addition, we review other behavioural and

cognitive strategies such as activity scheduling and cognitive restructuring that are commonly associated with CBT interventions for depression. The application of these strategies for older adults is illustrated with case examples.

Facilitation processes for peace psychologists

BREHERTON, D. (University of Queensland)

This workshop will provide opportunities for participants to share their own concepts of conflict and peace and to consider how these might shape their practice as psychologists. There will be a short presentation on "What in the world is peace psychology?" followed by interviews with practitioners of peace psychology from different parts of the world. Finally the workshop will reflect on how peace can be incorporated into the theory and practice of various branches of psychology and how psychologists can contribute to peace building at home and abroad.

Treating and preventing posttraumatic stress disorder

BRYANT, R. (University of New South Wales)

Acute stress disorder (ASD) describes initial stress reactions that are predictive of chronic posttraumatic stress disorder (PTSD). This workshop outlines assessment and treatment of ASD/PTSD. It commence with an outline of the fundamental theories underpinning ASD/PTSD. The workshop will then proceed to a recent update of empirical developments, with an emphasis on ASD. This review will include recent studies of behavioural, cognitive, and biological responses of trauma response. The workshop will provide a review of current assessment tools, as well as interactive discussion of strategies for assessing acutely traumatised individuals. A review of treatment studies will be conducted. Detailed outline of cognitive behaviour therapy strategies will be provided. Obstacles to treatment will be discussed in the context of case studies.

Beginner's guide to structural equation modeling: Basic concepts and applications

BYRNE, B.M. (University of Ottawa)

This workshop presents a nonmathematical introduction to the underlying rationale and basic concepts associated with structural equation modeling (SEM). It is developed around the presentation of generically-labelled models void of notation specific to particular SEM computer programs. Participants are shown how to: (a) decompose basic models into linear structural equations that serve in specifying hypothesized models, (b) evaluate the extent to which hypothesized models "fit" the data, and (c) determine the need for, and assess, findings from post hoc model-fitting. Although designed for researchers having no knowledge of SEM, a basic knowledge of multiple regression is recommended and some knowledge of factor analysis may be helpful.

Testing for measurement equivalence across groups: Basic concepts and applications

BYRNE, B.M. (University of Ottawa)

A critical prerequisite to multigroup comparisons is knowledge that assessment measures are operating equivalently (i.e., they are invariant) across groups. This structural equation modeling (SEM) workshop demonstrates procedures involved in testing for the equivalence of assessment scales across: (a) calibration/validation samples, and (b) independent samples. Examples include first-order and second-order factor models applied to both mono-cultural and multi-cultural groups. Workshop participants are "walked through" the analytic process from model specification in the computer input file to interpretation of results in the computer output file. To gain the most from this workshop, some knowledge of, and experience with SEM is recommended.

Beyond manuals: How to do child and family therapy really well

DADDS, M.R. (University of New South Wales)

This workshop will cover skills for working with parents of young conduct problem children. Engaging such parents can be challenge, and getting positive change, even more so. Attendees will be introduced to methods for joining with parents, identifying and overcoming obstacles to change, and maximising outcomes in parent training programmes.

Positive health and positive aging: Health and well-being throughout the lifespan

FOWLER, R. (American Psychological Association),
FOWLER, S. (Uniformed Services University of the Health Sciences)

Health--physical and mental--is more than the absence of illness. Research in positive psychology and positive health has identified factors that help people live longer, healthier, happier and more successful lives. Aging continues throughout the lifespan. Lifestyle changes that facilitate healthy aging will be presented along with case histories, exercises and opportunities for self-evaluation and discussion.

Entrepreneurship

FRESE, M. (University of Giessen)

In this workshop I walk through how psychological studies can be performed in the area of entrepreneurship. I start with a definition of entrepreneurship (around opportunity detection and exploitation) and describe how psychology can contribute to this area of study. Which psychological approaches help here, e.g., cognitive or emotional approaches, social psychology of groups, action and performance theory. Moreover, a number of important methodological issues for entrepreneurship research will be discussed. As I am field editor for psychology for Journal of Business Venturing – the most important entrepreneurship journal – I shall also discuss which problems appear when publishing in such a journal and how one can develop studies that will have an impact in this area.

Psychological treatment of compulsive hoarding

FROST, R. (Smith College)

Professor Frost has been at the forefront of developments in our understanding of compulsive hoarding and its contemporary psychological treatment. The symptoms of compulsive hoarding in adults include acquiring too many things, difficulty discarding, and excessive clutter that interferes with normal use of space and/or causes distress. Difficulty making decisions, emotional attachment to possessions, and strong negative emotions on parting with objects are hallmarks of this condition. A model for understanding hoarding behaviors, emotional attachments and beliefs about possessions will be presented along with intervention strategies. Tools for clinical assessment of the features and severity of hoarding and associated mood will also be presented. Intervention strategies to be presented include motivational enhancement, establishing goals for treatment, increasing organizing and problem solving skills, restructuring problematic beliefs about possessions, and exposure to removing possessions and reducing avoidance behaviors. Outcome research using this approach will be reviewed as well as limitations of such interventions and the utility of other strategies (e.g., self-help).

Item response theory: Concepts, models and applications

HAMBLETON, R. (University of Massachusetts)

Many testing agencies would like to use item response theory (IRT) models for developing, scoring, identifying bias, and equating of their aptitude, achievement, and personality tests. These IRT models, too, can be used to provide the measurement underpinnings for new test designs such as multi-stage testing and computer-adaptive testing. In this intensive one-day workshop, we will address many topics: (1) Shortcomings of classical test theory that have inspired the development of IRT models; (2) specific IRT models for fitting binary and polytomously-scored data (e.g., 1-, 2-, and 3-

parameter logistic models, graded response model, generalized partial credit model); (3) basics of item and ability parameter estimation; (4) graphical and statistical approaches for assessing model fit; (5) introduction to IRT software (e.g., BILOG-MG, PARSCALE, and WINGEN); (6) development of tests using item and test information, and automated test assembly; (7) identification of potentially biased test items (e.g., comparing item characteristic curves); (8) equating of test scores (designs, methods, and implementation); (9) reporting scores using item mapping; and (10) new test designs such as multi-stage and computer-adaptive designs.

If there is interest in participants gaining some practical experiences during the workshop, we could demonstrate several of the software packages including BILOG and PARSCALE, and highlight the use of WINGEN for conducting simulation research. I will provide reprints of several articles, and a brief bibliography for follow-up readings.

Evidence-based psychotherapy with LGBT clients

ISRAEL, T. (University of California)

This workshop will equip attendees with knowledge and skills to enhance psychotherapy practice with lesbian, gay, bisexual, and transgender (LGBT) clients. The presenter will provide attendees with an overview of current research that informs psychotherapy with LGBT clients. Attendees will learn about recent findings regarding sexual orientation identity development, conversion therapy, LGBT people of color, helpful and unhelpful psychotherapy practices, and therapist competencies for working with LGBT clients. This interactive workshop will include lecture, discussion, and role plays. By the end of this workshop, participants will be able to: (1) identify current research that informs psychotherapy practice with LGBT clients; (2) describe helpful and unhelpful psychotherapy practices with LGBT clients; (3) recognize the unique knowledge and skills necessary to work with transgender clients; and (4) demonstrate affirming responses to clients who are experiencing conflict between

their sexual orientation and their culture, religion, or other social identities and communities.

Adapting psychological interventions for older adult clients

KNIGHT, B. (University of Southern California)

Using Knight's Contextual Adult Life Span Theory for Adapting Psychotherapy (CALTAP), the workshop will present a framework for thinking about adaptations in psychotherapies with older adults that involves a greater focus on changes due to cohort effects, cultural differences, social context, and the specific challenges of later life than on developmental aging per se. The workshop will include presentations of clinical materials and time to discuss cases brought by the audience.

Effectiveness of workplace training

KRAIGER, K. (Colorado State University)

Abstract not available at the time of printing

How to get your book published: From idea to amazon

KURIANSKY, J. (Columbia University Teachers College)

ICAP attendees have valuable ideas and work that needs to be shared with colleagues and with the public. This "how to" workshop covers the important steps to take to get your book published in the field of applied psychology. It is given by a "media psychologist" who has a great deal of experience in this field, as a psychologist and an author who has published over a dozen non-fiction books in English in America over a span of twenty five years, as well as original books in Chinese and Japanese. The object of the presentation is for professionals from different countries to get their work known. The presentation gives very practical information and easy-to-follow steps about how to go from your idea to a formal proposal; where and how to submit your proposal; how to work with agents, editors and publishers; what to look for

in contracts; the pros and cons of self-publishing versus signing with a publishing house; and what you can and can't expect in the contemporary complicated publishing world. Other topics covered include publishing in both mass market and academic publishing houses, in hard back and paperback formats, in different topics related to psychology, in several editions. Tips will also be given on how to market your book, since getting the word out once your book is published is essential. Participants are encouraged to bring their ideas and projects, and specific attention and advice will be given to these individual projects.

Psychological treatment of problem gambling

LADOUCEUR, R. (Laval University)

Abstract not available at the time of printing

Motivational interviewing skills training

LINDNER, H. (Australian Psychological Society Ltd)

The 1-day workshop will present the principles, assessment techniques, and strategies of motivational interviewing. The training will also aim to develop participant-skills in motivational interviewing, including the assessment of a client's readiness to change, and behaviour change techniques to reduce ambivalence and increase efficacy to change. Specific topics to be covered in the training workshop include: principles and aims of Motivational Interviewing, Motivational Interviewing communication techniques, assessment skills for patient readiness to change behaviours, interventions for increasing motivation to change, and interventions to identify SMART goals and develop action plans. Skill development of the above areas will be achieved through demonstrations by the presenter and workshop attendees undertaking small group skill development activities. Psychologists and other health professionals have a major role to ensure effective client adherence to recommended client-managed treatments for chronic illnesses, such as arthritis, heart disease, diabetes, obesity, and asthma. Additionally, psychologists can contribute significantly to client self-

management changes in health risk behaviours, such as smoking and alcohol abuse. Although there is awareness in the community of health risks behaviours, substantial non-adherence is reported for a range of interventions, including health behaviour changes associated with physical exercises, medication consumption, monitoring schedules, lifestyle behaviours, and medical and allied health appointments. The literature reveals that education and instructions on the prevention and treatment of a medical condition have a role in developing effective client self-management, but that these are not sufficient by themselves to ensure health behaviour change. Unfortunately, not all clients are ready for change. Researchers have proposed that health professionals who use Motivational Interviewing techniques can significantly enhance client self-management of chronic illness and illness prevention. There is a growing requirement from Governments around the world for medical, nursing and allied health professional training programs to include strategies, such as Motivational Interviewing, to enhance patient adherence to recommended treatments.

Psychological management of chronic headaches

MARTIN, P. (Monash Medical Centre)

It has been estimated that globally, the percentages of the adult population with an active headache disorder are 46% for headache in general, 11% for migraine, 42% for tension-type headache, and 3% for chronic daily headache. On the ranking of causes of disability of the World Health Organization, this brings headache disorders into the 10 most disabling conditions for the two genders, and into the 5 most disabling conditions for women. Over the last three decades psychologists have contributed to our understanding of headaches and developed highly effective treatments for tension-type headache and migraine. This workshop will present a functional model of chronic headaches that is designed to help understand the variance in headaches – why individuals suffer from headaches at one time rather than another, why they are getting headaches during this period of their lives rather than other periods, why the headache disorder

began when it did, and why they are vulnerable to suffering from headaches? The model serves to educate patients and inform the assessment and treatment process. The management approach presented will be a form of cognitive behaviour therapy developed by the workshop presenter and validated in a recent randomised control trial. In this study, the average reduction in headaches resulting from this approach was 68% at the end of treatment and 77% at 12 month follow-up. The workshop will begin with a discussion of its aims and objectives followed by a focus on the headache experience. The peripheral and central mechanisms of primary headaches will then be discussed followed by headache classification and diagnosis, and danger signs that prompt referral to a neurologist. It will include assessment of headaches using interviews, self-monitoring, questionnaires and behavioural experiments. Treatment techniques will include education, relaxation training, imagery training, attention-diversion training, and cognitive therapy for modifying maladaptive thoughts and beliefs related to headaches. It will also include behavioural management of headache triggers, a major current focus of the presenter's research program.

Inpatient aggression and reducing coercive practices

MARTIN, T. (Monash University), GINDERS, T. (Forensicare)

Aggressive behaviour in psychiatric hospitals is common and has a significant impact on patients, staff and visitors to psychiatric hospitals. It also affects ward atmosphere and routine and care delivery in general. Coercive practices such as seclusion and restraint have been used to manage inpatients aggression. This workshop will introduce participants to a wide range of strategies that have been found to be effective in reducing the use of seclusion and restraint across the world. Several organisational approaches, including leadership, workforce development, use of data, trauma informed care and sensory modulation will be presented as important approaches that enhance therapeutic practice and reduce coercive methods. The most common precipitants to aggression towards staff will be discussed and recent research examining

the role of interpersonal style, its interaction with psychiatric symptoms, and its impact on patients' perceptions of coercion, and aggression and self-harm during psychiatric hospitalisation will be discussed. Implications, drawn from interpersonal theory and research examining patient satisfaction and compliance in alternate health settings will be drawn upon to guide staff in new ways to interact with, and deescalate patients at risk of aggression. Structured methods of risk assessment that help to identify patients at risk of imminent aggression are also required for early intervention in order to decrease reliance on coercive practices. Attendees will be introduced to one tool that is used to assess the risk of imminent aggression, the Dynamic Appraisal of Situational Aggression: Inpatient Version (DASA:IV). This workshop holds relevance for the range of disciplines in a range of inpatient/residential settings where aggression is a common experience.

Emotional intelligence: From research to application

MATTHEWS, G. (University of Cincinnati), ROBERTS, R. (Center for New Constructs)

The construct of emotional intelligence (EI) continues to maintain a high profile in applied psychology. It is believed that the competencies related to EI contribute to greater job success and work satisfaction, to social-emotional functioning at school, to better mental health and to more constructive interpersonal relationships. However, despite its potential, the science of EI is still at an early stage of development, and many key questions relating to both theory and practice remain unanswered. There have been particular difficulties in deriving valid measures of EI for use in applied psychology. In addition, many commercial exploitations of the concept are not based on sound psychological science. Thus, the practitioner requires a critical understanding of research on EI in order to derive applied benefits from this work. This workshop will familiarize practicing psychologists, researchers, and graduate students with current methods of assessing emotional intelligence (EI) and problems that may arrive when applying these measures for research or practical purposes. The

goals of this workshop are as follows: to familiarize participants with the leading research and theory in the area, to evaluate critically the leading methods for assessment of EI, and key tests and measures, to introduce new techniques for evaluation including situational judgment tests (SJTs), and to highlight issues in transitioning research into specific applications (participants may raise specific issues for discussion).

Psychological responses to disasters: An empirically informed approach to helping the survivors of trauma effectively and safely, in the field and in the clinic

MONTGOMERY, B. (Australian Psychological Society), MORRIS, L. (Private Practice)

Disasters, both natural and man-made, are an inevitable occurrence. Involvement in a traumatic event triggers a series of responses which can be seen as the Crisis Response and Recovery Cycle (CRRC). While recognising the variability intrinsic to psychological phenomena, the CRRC is useful for understanding reactions to trauma and guiding interventions. The Crisis Response typically involves shock, disbelief, then a growing realisation of the reality of the event, which triggers a psychologically frozen survival state. When the event ends, the Recovery phase can begin, typically involving shock again, depression, mood swings, anger, reflection on the experience, and finally laying it to rest as a bad memory that does not intrude unacceptably into life. Survivors normally progress through a range of reactions to trauma and benefit most from interventions suited to their present state and needs. Effective psychological interventions parallel the development of the CRRC. Psychological First Aid (PFA), as the term implies, is aimed at immediate alleviation of suffering, minimisation of further injury, and facilitating recovery. During and immediately after a traumatic event, PFA involves provision of basic emotional and practical support, particularly to restore a sense of safety. In the longer aftermath of a disaster, PFA involves the application of some basic counselling skills to facilitate long-term recovery. PFA may be more effectively delivered by non-psychologists, with support from psychologists. Available evidence suggests

these relatively brief interventions are sufficient to help most survivors heal themselves because most people are reasonably psychologically robust. However, there are usually 10-20% of survivors for whom this won't be enough. For them, effective support involves provision of evidence-based interventions to alleviate or prevent serious post-traumatic stress reactions. Recent reviews of research show that, when initiated within three months of the event, these interventions can achieve those goals. This workshop will introduce participants to the research base and practice skills for helping trauma survivors safely and effectively, in the field and the clinic.

Caution: You are advised that skills practice involves simulation of working in the field. This is intentionally stressful, so intending participants, particularly survivors of past traumatic events, should consider this before registering.

Obsessive-Compulsive Disorder (OCD): A cognitive-behavioural, attachment and self-based approach to understanding and treating OCD

MOULDING, R. (Swinburne University of Technology), KYRIOS, M. (Swinburne University of Technology), NEDELJKOVIC, M. (Swinburne University of Technology)

This full-day workshop will cover the assessment, diagnosis, and treatment of Obsessive-Compulsive Disorder (OCD). The workshop will draw on cognitive-behavioural theory, as well as attachment and self-related concepts to develop a conceptual framework for understanding OCD, its treatment, and the requirements for engaging clients in psychological treatment and management. The workshop will cover basic and advanced cognitive-behaviour therapy, including exposure and response prevention, cognitive therapy, ACT, mindfulness, and self-based techniques. We will also discuss important issues in engaging clients with OCD. The workshop will allow for participant interaction and case discussion. Notes will be made available, and additional references and resource material will be suggested

Psychological models and treatment for bipolar disorder

MURRAY, G. (Swinburne University of Technology)

Bipolar disorder is a serious disorder of mood which affects at least 1% of the population. Treatment outcomes for this complex and variable condition are not satisfactory, but psychological models and treatment approaches show great promise for improving symptoms and quality of life. Workshop participants will be introduced to theory and skills related to the assessment and psychological treatment of bipolar disorder. Recognised treatments will be described, and the challenges in applying them in everyday practice considered. We will also consider the obvious gaps in the existing therapeutic toolbox. These include recent discoveries about well-being strategies used by high functioning people with bipolar disorder, and the need to account for the marked strengths of this population. The workshop will be conducted in an interactive seminar format. Instructional videos will be used to demonstrate the symptoms of bipolar disorder. Participants will be provided with a handbook of resources and background information supporting the workshop content.

Psychological management of persisting pain

NICHOLAS, M. (University of Sydney)

Psychologists are often a crucial part of multidisciplinary treatment plans for patients with persisting pain. However, despite the strong evidence for the utility of psychological interventions for people with persisting pain, there are often obstacles to their effective application. This workshop will focus on evidence based psychological interventions which can assist the pain sufferer to better manage their pain and return to a better quality lifestyle, whether at home or at work. Dr Nicholas will present a summary of current thinking about pain, its assessment and interventions applicable to the acute and chronic stages of pain. The focus will be on the importance of integrating our interventions with those of other key stakeholders, including

medical and the physiotherapy interventions, as well as rehabilitation providers. The skills and knowledge-base psychologists should possess for this work will also be explored and practice in these skills will be provided as part of the session.

Cultural differences and ethical dilemmas in supervision

PETTIFOR, J. (University of Calgary), FALENDER, C. (University of California)

This cutting edge workshop by two highly esteemed North American psychologists challenges participants to address the ethical dilemmas that occur when supervisee, supervisor and client come from diverse cultures. These dilemmas arise in different contexts of power relationships, community expectations and of practice, teaching, research and administration. The issues are global wherever psychology hopes to flourish, and cannot be limited to any one region or jurisdiction. Multiculturalism has received considerable attention in North America in the past few decades, especially in terms of the mainstream professional person interacting with the minority client. Supervision is only beginning to be considered a specialty area of psychological practice that requires competency-based education and practice standards. The application of ethical guidelines to the practice of supervision is even more recent and in terms of the ever-increasing mobility of psychologists across national boundaries even more urgent. The use of vignettes for educational purposes is widely used in bringing living reality to the consideration of abstract principles. Workshop objectives include to: 1) Understand the universality of respect for diverse persons and peoples; 2) Understand the behavioral specificity of cultural applications of respect; 3) Recognize approaches to ethical decision-making in supervision when cultures appear to collide; 4) Increase self-understanding and personal limitations in working across cultural divides; and 5) Increase commitment to humanitarian well-being world-wide. The workshop begins with an overview of the purpose of codes of ethics and codes of conduct from both philosophical and regulatory points of view. Small group exercises demonstrate how respect

is shown in different cultures. Participants in group and plenary sessions become aware of the complexities of multicultural relationships in competency-based supervision. Discussants from China and Australia will enhance the international focus of the workshop.

Self-regulation as a key factor in delivering time-limited interventions to parents of children and adolescents with social, emotional and behavioural problems: Unpacking Triple P

RALPH, A. (University of Queensland)

This workshop introduces participants to the Triple P - Positive Parenting Program, a multi-level system of evidence-based interventions designed to provide parents with specific strategies to promote appropriate behaviour and manage inappropriate behaviour for their children up to the age of 16 years. The program is based on a combination of education about the developmental needs of children and adolescents, skills training to improve communication and problem-solving skills, plus specific modules to deal with common problems encountered by parents with their children and adolescents that can escalate into major conflict. The main components of the program will be described and the skills and strategies that parents can use to improve their parenting will be demonstrated and illustrated. Triple P utilises theories of developmental trajectories and incorporates an analysis of how interactions between parents and children come under strain as competing peer interactions become more frequent during adolescence. The self-regulatory approach which infuses the Triple P system and plays a key role in promoting generalisation and maintenance of behaviour change will be illustrated with video examples and practical exercises.

Nature and treatment of social phobia

RAPEE, R. (Macquarie University)

Social phobia affects around 5% of the Australian population in a 12-month period and impacts on all areas of life functioning. It is a chronic condition that starts young and is associated

with especially low levels of remission. Traditional treatments for social phobia have resulted in some of the lowest improvement rates for any anxiety disorder.

Over the past decade, researchers at the Centre for Emotional Health at Macquarie University have been working theoretically and empirically to improve our treatment for social phobia. This has resulted in a comprehensive treatment program that has been empirically validated and shown to produce larger effects than traditional "older-style" treatments. The aim of this workshop will be to describe the nature and treatment of social fears and anxieties in adults with particular focus on our current, "best-practice" treatment program. The workshop will begin at an introductory level, but will move onto more advanced applications. We will begin with coverage of the recognition of social fears and diagnosis of social phobia and related disorders in adults. The workshop will then move on to consideration of assessment issues and will provide an overview of current views of aetiology and maintenance of the problem. The majority of the workshop will concentrate on coverage of psychological treatment strategies. Basic components such as cognitive restructuring and exposure will be covered. More recent techniques such as attention training, the role of safety cues, and detailed feedback will also be addressed. Given time, difficulties in application such as comorbidity and other complications will be discussed. Where possible, the workshop will make use of case presentations, video, and role play.

Attendees will learn how to recognise and diagnose social phobia in adults, how to assess social fears, a better understanding of the possible causes and maintaining factors in social fears, current strategies in the management of social phobia.

References:

Rapee, R.M. (2001). *Overcoming shyness and social phobia: A step by step guide*, 2nd ed. Sydney: Lifestyle Press.

Rapee, R.M. & Sanderson, W.C. (1998). *Social phobia: Clinical application of empirically validated treatments*. New Jersey: Aronson.

Rapee, R.M., & Heimberg, R.G. (1997). A cognitive-behavioral model of anxiety in social phobia. *Behaviour Research and Therapy*, 35, 741-756.

Rapee, R. M., Gaston, J. E., & Abbott, M. J. (2009). Testing the efficacy of theoretically-derived improvements in the treatment of social phobia. *Journal of Consulting and Clinical Psychology*, 77(2), 317-327.

The connected psychologist: e-Mental health applications in professional practice

REYNOLDS, J. (The Australian National University), CHRISTENSEN, H. (The Australian National University), GRIFFITHS, K. (The Australian National University)

Psychologists are increasingly being expected to understand e-health applications relevant to mental health and to be able to support clients who wish to use these programs safely and effectively. This workshop will provide a general overview of e-mental health applications including ethical considerations and the current status of research into internet programs for common mental health problems such as anxiety and depression. It will focus on 3 areas of e-health applications: automated self-help and therapeutic programs; tools which support consumers to understand mental health and make decisions about treatment; and online peer and carer support groups. Participants will have the opportunity to interact with 5 highly credible programs which are available to the general public free of charge. Case studies will be presented to demonstrate how these programs may support the delivery of psychological services in various care settings. The workshop will be interactive and discussion of psychologists' experiences and concerns about internet mental health applications will be encouraged and considered in future e-hub developments. During the workshop, interested practitioners will be invited to join a reference group to participate in ongoing development and research.

Clinical neuropsychology

RUFF, R. (University of California)

The brain subserves the areas of cognitive, emotional, and physical functioning. Neuropsychologists specialize in determining the effects of brain damage on cognitive and emotional functioning. The aim of the workshop is provide an overview of applied neuropsychology. Topic covered in the workshop include (1) a historical perspective and scientific framework for understanding the relationship between brain and behavior. (2) The range of clinical applications that neuropsychologists provide in both the inpatient and outpatient medical settings will be addressed. (3) The theoretical background will be coupled with the psychometric measures that are currently being used for assessing language abilities, visual-spatial integration, attention, memory, learning, and executive functioning. Within each of these domains, the brain's ability to process information both sequentially and simultaneously will be examined. (4) The challenges of prognosticating from neuropsychological tests to daily functions (ecological validity) will be addressed. (5) Finally, new approaches will be introduced for cognitive remediation and adaptive psychotherapy for individuals with acquired brain damage.

Action research in applied contexts

SOMMER, R. (University of California)

Because so much psychological research remains buried in file drawers or is published in journals not read by practitioners or the public, or is proprietary, social psychologist Kurt Lewin developed action research (AR) with tripartite goals: to advance knowledge, to improve a local situation, and to improve the utility of action research through reflective practice. In Lewin's view, all three objectives can be accomplished within the bounds of a research program. The guiding principle of AR is the intensive involvement throughout the research of potential users of the information. To achieve its tripartite goals, AR requires multimodal dissemination. This is not business as usual for the psychologist, it is a different type of business. Following a discussion of the nature of AR, I will provide examples of its utility in five applied contexts. Delivery of the research report was followed by post-research evaluation to

document the distribution and impact of the research:

1. The conversion of a Canadian psychiatric hospital into a questioning community and experimenting society. I will also discuss the early liaison between psychologists and architects.
2. The development and promotion of farmers markets.
3. Research to assist consumer cooperatives.
4. Research to assist parents of mental health clients.
5. Research to assist community tree-planting organizations who are part of Global Re-Leaf.

No single form of dissemination will be adequate for satisfying Lewin's three goals for action research. The last hour of the Workshop will describe the range of outlets available in AR, with a specific focus on writing for practitioners and the public. In addition to basic, applied and professional journals, potential print outlets include trade magazines, general magazines, newspapers, and newsletters, plus oral presentations at meetings, and use of digital media. Time permitting, I will discuss the special nature and benefits of local research and local dissemination.

Incorporating cognitive behaviour therapy in community settings: The case of hoarding

STEKETEE, G. (Boston University)

Professor Gail Steketee is Professor and Dean of the School of Social Work at Boston University, USA. Together with Randy Frost, Gail Steketee has developed a cognitive-behavioural approach to treating hoarding problems of excessive acquiring, difficulty discarding and extensive clutter that causes distress and interferes with functioning. This workshop will focus on how this treatment can be disseminated to community practitioners with varying degrees of professional training, including to undergraduate student assistants, paraprofessional coaches and professional organisers. Professor Steketee will discuss community-based task forces developed to deal with hoarding, as well as training and supervision supports, and community-based intervention programs. The half-day workshop will be of special interest to psychologists and

psychiatrists as well as health and mental health care workers, social service providers, elder service providers, housing workers, fire and police services, and professional organisers.

Self-care when treating personality disordered patients

STEVENS, B. (University of Canberra)

There are risks working with personality disordered clients. This will be explored with a focus on those who meet the criteria for Borderline and Anti-social (psychopathic) Personality Disorders. Topics will include emotional costs in treating such clients, counter-transference themes, boundary issues, differences in expressing anger with the different personality disorders and potential legal complications including complaints to registration boards. There will be a discussion about the increased risk of boundary crossings and sexual involvement by practitioners, and an opportunity to consider different ways of self-care while busy in practice. The workshop will provide opportunity for discussion in table groups and in response to lecture material in the whole group. Brief video extracts from *Play Misty for Me* and *The Sopranos* will be shown. Participants will be provided with notes from the workshop and a copy of overhead slides.

Mood profiling in sports psychology

TERRY, P. (University of Southern Queensland)

Getting in the right mood for athletic competition is seen by many athletes and coaches as an important part of the process of mental preparation, and the success or failure to do so is often presented by athletes as an attribution to explain performance outcomes. This workshop will address the what, why and how of mood assessment and mood regulation for athletes, especially those preparing for international competition. The assessment of pre-competition mood, referred to as mood profiling, has a long history in the world of sport psychology. Mood profiling can assist processes such as acclimatisation, determining optimal training load, tapering, monitoring injured athletes, problem identification and also act as a

catalyst for discussion. The mood regulation process involves assessment and interpretation of mood responses, followed by prescription of evidence-based interventions that, ideally, have been pre-learned and practised. In particular, this workshop will explain how to administer, score, and interpret the Brunel Mood Scale (BRUMS: Terry, Lane, Lane, & Keohane, 1999; Terry, Lane, & Fogarty, 2003), a 24-item measure that assesses six dimensions of mood – anger, confusion, depression, fatigue, tension, vigour – that have been shown to be predictive of sport performance (Beedie, Terry, & Lane, 2000). The workshop will include examples of mood regulation strategies that have been shown to be effective among athletes (Terry, Dinsdale, Karageorghis, & Lane, 2006), many of which are very easy to implement. Workshop participants will be provided with a BRUMS User Guide.

Treating anorexia nervosa: Addressing nutritional, motivational, and cognitive issues

WADE, T. (Flinders University)

Anorexia nervosa is an eating disorder characterized by low weight, medical complications, and a strong ambivalence about recovering nutritional health. This workshop outlines assessment and treatment of anorexia nervosa, based on the Cognitive Interpersonal model developed by Janet Treasure and Ulrike Schmidt at the Institute of Psychiatry in London. It will commence with an outline of this theory, and then summarise the therapy derived from this theory, called the Maudsley Anorexia Nervosa Outpatient Treatment for Adults (MANTRA). A recent update of an empirical evaluation of the therapy will be presented. A review of current assessment tools will be provided, as will their use in a way that promotes rather than hinders engagement. A detailed outline of the therapy will be provided, including use of motivational interviewing strategies, use of therapeutic writing, and cognitive behaviour therapy strategies. Examples of therapy and obstacles to treatment will be discussed in the context of case studies.

Advanced training in acceptance and commitment therapy for depression

ZETTLE, R. (Wichita State University)

This workshop focuses on extending and applying acceptance and commitment therapy (ACT) in working with clients who struggle with depression. Accordingly, it is strongly recommended that those in attendance have already completed an introductory ACT workshop. Brief coverage of the ACT theory of depression and the various processes and pathways that contribute to its initiation, maintenance, and exacerbation consistent with the broader ACT-model of human suffering and psychological inflexibility will be provided before focusing on key therapeutic skills and processes such as instigating value-directed behavioral change by removing psychological barriers that stand in the way of valuing. Because the most useful way to learn ACT is to do it rather than merely talk about it, the workshop will be more experiential than didactic in nature, with those in attendance invited to participate in numerous exercises, role plays, and demonstrations that illustrate the processes that contribute to depression as well as the overall approach and basic skills central in effectively working with clients who struggle with this wide-spread form of human suffering.

participate in numerous exercises, role plays, and demonstrations that illustrate the overall approach and basic skills that comprise ACT.

Introduction to acceptance and commitment therapy

ZETTLE, R. (Wichita State University)

This workshop will provide an introduction to as well as an overview on how to conduct acceptance and commitment therapy (ACT) with clients experiencing a wide range of human suffering. Brief coverage of functional contextualism as the philosophical foundation for ACT and of relational frame theory as a functional contextualistic account of language and cognition will be provided before introducing the ACT-models of human suffering and psychological growth and flexibility. Because the most useful way to learn ACT is to do it rather than merely talk about it, the workshop will be more experiential than didactic in nature, with those in attendance invited to

Abstracts of the 27th International Congress of Applied Psychology

Debates

Have evidence based practice and empirically supported treatments improved consumer outcomes? Or are they just window dressing for an unscientific profession?

Evidence-based approaches to psychological practice are touted to have led to a range of improvements in psychological practice and training, and even improved outcomes for consumers of psychological services. However, many argue that evidence-based practice is built on group data, and may have little relevance to individual contexts. In the clinical arena, some argue that positive outcomes are based on the quality of the relationship between psychologist and client, and that the notion of “empirically supported treatments” panders to the expectations of “bean counters.” Cynics go so far as to argue that psychologists are actually unscientific in their approach to practice, and that their purported allegiance to evidence based practice is no more than window dressing. Leading experts in this field will examine such arguments and articulate a comprehensive argument for and against evidence based practice.

Is technology making psychologists redundant?

Online psychological assessments and treatments, internet-based information sources, online research projects, and social networking sites have proliferated over the past 10 years. Such developments are fast changing the nature of psychological practice and, as they become increasingly more sophisticated, may render psychologists redundant. Leading experts in this field will examine arguments for and against the perceived limited lifespan of psychology as a profession.

Prescription rights for Psychologists?

In advocating for increased psychological services that aim to improve community wellbeing, professional psychology organizations cannot ignore the need to pursue training and accreditation of psychologists in the area of prescription rights for psychoactive medications. This is particularly true when one considers rural

and remote populations, groups with compromised communication skills, and a limited workforce. However, such prescription rights might fundamentally change the nature of psychological practice and compromise our specialist skills. Leading experts in this field will examine such arguments and articulate a comprehensive argument for and against prescription rights for psychologists.

Psychologists as agents for social change: Are we relevant to the greatest moral challenge of our time – climate change?

Many psychologists around the globe are speaking up about the important role that psychologists can play in dealing with the challenges of climate change (e.g., Swim et al., 2009; Gifford, 2008; Kazdin, 2009). But to what extent should psychologists be involved? Should we limit ourselves to important work in research, in fostering pro-environmental behaviour change, in helping people adapt to changing environments? Or do psychologists also have a responsibility to ring the alarm bells and alert the wider community to the looming threats to our health and survival? Do we have a duty to warn? Do we have a duty to scale up our activity to protect the future health of people all over the world? If we decide that we do have a social and moral responsibility, how effective can we be in bringing about change? How well do we match our rhetoric with our actions? As a professional organisation? As individual citizens? Or is it none of our business because we are scientists who don't get involved in politics, or clinicians who are mainly treating people with mental health problems? Is our science too conservative or our profession too self-focussed to make a difference? Or even if we wanted to be involved, is psychology really a very weak base for social change? This session will take the form of a Hypothetical, where an imaginary situation is created and a selected panel of experts set about solving a practical problem that involves many of these urgent and riveting questions and challenges, with opportunity for audience participation as well.

The Third Wave of psychotherapies: Tsunami or trickle?

Cognitive-behavioural approaches to psychological practice have been in the ascendancy over the past 20 years. However, in the clinical arena at least, evidence has emerged of their limitations. As a result, therapists have looked beyond CBT to improve client engagement and outcomes. A “third wave” of therapies has emerged incorporating mindfulness-based practice, acceptance strategies, self-based interventions, and even metacognitive approaches. These “third wave” therapies have become enormously popular amongst practitioners. But how different are these approaches to CBT? Are they akin to CBT in different “clothing?” And are they vulnerable to the same limitations as CBT? Some argue that this “third wave” of psychotherapies is just a passing phase, and that in 10 years time it will be no more than a trickle. Leading experts in this field will examine such arguments and articulate a comprehensive argument for and against the notion that the third wave of psychotherapies constitutes a “tsunami”.

Abstracts of the 27th International Congress of Applied Psychology

Forums, Panels and Roundtables

2010 World Psychology Forum

KNOWLES, M. (Monash University), SILBEREISEN, R. (University of Jena)

Co-hosted by the International Association of Applied Psychology and the International Union of Psychological Science, the World Psychology Forum will bring together officers and representatives from the world's international and regional psychology organizations to foster discussion about major advances in psychology of which politicians and the general public are essentially unaware. The Forum will focus upon the topic of well-being and the appreciable expertise based upon research that the discipline of psychology currently possesses. Representatives from the above international and regional psychology organizations will present a brief review of the major advances that their fields of specialisation have made in contributing to improving well-being. This will be either in the more channelled sense of subjective well-being (affective = positive/negative emotions, cognitive = satisfaction with life) or in the broader sense of psychologically relevant aspects of quality of life, as caught in various indices on the political arena of which the human development index would be an example. Issues related to making this expertise available to the public in general or politicians in particular may also be addressed. All delegates at the Congress are cordially invited to attend.

A case study in relationship counselling: Is evidence based therapy a goal or a dream?

STEVENS, B. (University of Canberra), DADDS, M. (University of New South Wales), HALFORD, K. (University of Queensland), HOISE, E. (Private Practice), BRAY, J. (Baylor College of Medicine), GORDON, A. (Private Practice)

A case study will be presented in relationship counselling. There are different evidence based treatment approaches to treating couples. There will be a focus on the practical aspects of treatment with case formulation, treatment options and what might be expected in terms of improvement (or otherwise). There will also be an opportunity to discuss what both clinical and

counselling psychology might have to offer in relationship therapy.

A case study in the treatment of an offender: Evidence based treatment approaches in forensic psychology

STEVENS, B. (University of Canberra), OGLOFF, J. (Monash University), COXON, L. (Private Practice), ZETTLE, R. (Wichita State University), MONTGOMERY, B. (Private Practice)

A case study will be presented with treatment of an incarcerated offender. What evidence based treatment approaches might be appropriate? What are the potential difficulties? There will be a focus on the practical aspects of treatment and a strong applied dimension to the discussion. The possible application of Acceptance and Commitment Therapy to this group will be considered and research possibilities raised. There will also be an opportunity to consider more broadly what both clinical and forensic psychology might have to offer.

A cross-cultural research incubator on applicant reactions: Expanding the cross-cultural frontier

CARLESS, S. (Monash University)

The proposed research incubator is designed to get new culturally relevant ideas to make sure that individuals feel fully invested, and to provide a forum as an active exchange between researchers in this field. During the session, participants will share their interests in the topic, explore major issues and trends in the area, narrow their focus to specific research questions and hypotheses, and organize specific research projects that have the potential to produce publications in top-flight Work, Industrial, and Organizational Psychology and Management journals. Attendees will also follow up on previous contacts, projects, and collaborative efforts that are on-going. An international team of experts on the topic will serve as facilitators for the session, with the aim of building research ideas and collaborations among participants. In this capacity, facilitators will identify key areas that require attention in the field, provide feedback and editorial suggestions on research

ideas, and provide any other help that motivates international collaborations. Anyone who is interested in participating in research on this topic cross-culturally is welcome to attend. The session will therefore provide the ideal form for partnerships to be made among (1) established and newly emerging researchers, (2) researchers interested in tackling questions in different substantive areas (e.g., stress, culture, attitudes, selection, leadership), (3) academics and practitioners, and (4) researchers from different geographical locations.

A model of interdisciplinary assessment and treatment of ASD

MATHEWS, R. (Australian Psychological Society),
BRYAN, M. (Private Practice), WARDROP, D.
(Private Practice), LAUFER, A. (Private Practice)

It is increasingly recognised that best practice assessment and treatment of ASD requires an interdisciplinary approach including medical, allied health and educational specialists. As part of an Australian Government initiative the APS worked in collaboration with Speech Pathology Australia and Occupational Therapy Australia to produce an education and information package to promote interdisciplinary practice for health professionals working with children with ASD. Using case study presentation a model will be provided to demonstrate how interdisciplinary practices can be applied in different care settings and the role of general practitioners, medical specialists and allied health professionals. The presentation will involve contributions from a psychologist, occupational therapist, speech pathologist and a paediatrician. Whilst all therapists work privately as sole providers, all are dedicated to working as a team in order to gain the most effective, and often much more intricate and complex, understanding of the children in order to provide accurate management plans to families and schools.

A retirement research incubator: Expanding applied research frontiers

WANG, M. (University of Maryland), HESKETH, B.
(University of Western Sydney), GRIFFIN, B.
(Macquarie University)

The proposed research incubator is designed to provide a forum as an active exchange between researchers in the field of retirement research. During the session, participants will share their interests in the topic, explore major issues and trends in the area, narrow their focus to specific research questions and hypotheses, and organize specific research projects that have the potential to produce publications in top-tier Applied Psychology journals. Drs. Mo Wang, Beryl Hesketh, and Barbara Griffin will serve as facilitators for the session, with the aim of building research ideas and collaborations among participants. In this capacity, facilitators will identify key areas that require attention in the field, provide feedback and editorial suggestion on research ideas, and provide any other help that motivates international collaborations. Anyone who is interested in participating in research on this topic is welcome to attend. The session will therefore provide the ideal form for partnerships to be made among (1) established and newly emerging researchers, (2) researchers interested in tackling questions in different aspects of retirement research, (3) academics and practitioners, and (4) researchers from different geographical locations.

Applied critique? Community critical psychology in action

FRYER, D. (Charles Sturt University), GIOLLA
EASPAIG, B.N. (Charles Sturt University), FOX, R.
(Charles Sturt University), FREEMAN, L. (York St
John University), LAUFFENBURGER, S.K. (Charles
Sturt University), MCCORMACK, C. (Easterhouse),
SONN, C. (Victoria University), VENO, A. (Victoria
University)

The panel will discuss the importance of developing and enacting politically progressive community critical psychologies as contributions to the collective transformation of social reality to address the misery and injustice characterizing contemporary societies. The discussion aims to explore how the practical engagedness, community relevance and commitment to intervention and prevention characteristic of community psychology, and the intellectual sophistication, progressive ideology and radical reflexivity characteristic of critical psychology can be combined to effectively tackle contemporary immiseration. This includes

psychologically toxic unemployment, gendered abuse, disabling educational practices, contemporary colonisation, material inequality and abject poverty, racism, psy-governmentality and further assaults on the already marginal and depowered. The panelists are Brona Nic Giolla Easpaig, postgraduate student at Charles Sturt University, who is engaged in community critical praxis in relation to sexual violence; Rachael Fox, community critical psychologist and lecturer in psychology at Charles Sturt University, who is engaged in community critical praxis in relation to school exclusion and childhood economic migration; Lizzie Freeman, postgraduate student at York St John University, York, England, whose relevant interest is in critical pedagogy; David Fryer (Chairperson), professor of community critical psychology at Charles Sturt University, President of the European Community Psychology Association 2009-2011, and critical unemployment researcher; Sandra Kay Lauffenburger, chronic pain therapist and researcher, Canberra; Ibrahim Makkawi, professor of community psychology at Birzeit University, Palestine, whose relevant interest is in contemporary colonisation; Cathy McCormack, Scottish community activist, author and film maker whose relevant interest is in the 'briefcase war' being waged on working class people; Chris Sonn, associate professor in community and cultural psychology at Victoria University, whose relevant interests are in Aboriginal issues (social and cultural inclusion, immigration and cultural diversity, identity and racism); and Art Venio, adjunct professor at Victoria University, whose relevant interests are in violence, policing, motor cycle clubs and social change.

Are we developing the right leaders for the future?

GORDON, A. (Private Practice), BLOCH, B., COOPER, S., LAWRENCE, C., PATTERSON, K.

Leaders may be born – but they can also be developed. Psychologists could play a key role in ensuring that our leaders are ready and able to meet the challenges of the 21st century. Perhaps we could assist those without the genetic skills – elected into power – to manage their position responsibly and lead nations into a peaceful and sustainable age. Panelists include Amanda

Gordon, former APS President, and initiator of the APS Strategic Leadership Programme; Barry Bloch, Director of Heidrick & Struggles, where he has provided both coaching and top team facilitation to many non-executive and executive teams and individuals, and also designed and implemented senior executive level assessment and development centres; Dr Saths Cooper, psychologist and political activist, Chair of Conquest for Life, Johannesburg, Medcover Medical Scheme, Bedfordview, Impilo of Nation Pty Ltd, Johannesburg and Afrique Condome Pty Ltd, Durban and Director of the Board of Healthcare Funders of Southern Africa; former Australian politician Carmen Lawrence; and Professor Beryl Hesketh, former Pro-Vice-Chancellor (Sciences and Technology) at the University of Sydney.

Behaviour change and patient centred care in chronic illness management in China

LI, Z. (Centre of Disease Control and Prevention, Fengtai District, Beijing, China), WERNER, K. (Private Mental Health Consumer Carer Network), O'HANLON, M. (Private Mental Health Consumer Carer Network National Committee and blueVoices), MCBRIDE, T. (Australian Health Care Alliance)

This paper reviews the contributions of behaviour change and patient centred approaches to chronic illness management in China. As in many countries in the world, China is facing the significant challenge of population ageing and the increasing burden of chronic diseases. Recent Chinese health system reforms have focused on strengthening community-based health services to better meet the needs of citizens through primary health care and multidisciplinary services. Diabetes is one of the most common chronic conditions in the Chinese urban community. In the past Chinese clinicians have used conventional medical interventions to treat chronic illnesses such as diabetes but these have had mixed results. Recently, in a joint program of the Beijing Government, Fangzhuang Community Health Service, Monash University Australia, Peking University China and the Australian Psychological Society, the Happy Life Club (HLC) has been established in Beijing. The HLC is built on the experience of the Australian

Good Life Club. In both programs behaviour change techniques (motivational interviewing) and patient centred principles and practices have been used to treat chronic illnesses with an emphasis upon diabetes and coronary heart disease, with promising results. The implications of and prospects for the use of these approaches in the Chinese health system is discussed. These include policy implications, training requirements and implications for service design and delivery in China as a new and creative way of addressing the burden of chronic illness.

Challenging times for the Australian Health Reform Agenda -- where does psychology fit? Consumers and carers speak out

LOVELOCK, H. (Australian Psychological Society)

The aim of this Forum is to bring the 'human face' to the discussions around the proposed reform of the Australian health care system which includes mental health. A consumer and a carer from the national mental health advocacy peak body, the Private Mental Health Consumer Carer Network (Australia) will give their individual perspectives of where they see psychology fitting within this reform. These presentations will be followed by a representative from the Australian Health Care Reform Alliance (AHCRA), a non government body of 50 organisations representing consumers and health care providers advocating for a fairer and more effective health care system. The Forum will consist of the three twenty minute presentations with time at the conclusion for questions and discussion. The audience will be encouraged to explore the issues raised in the presentations and suggest ways to overcome any perceived problems. It is anticipated that a greater appreciation of a health care system based on the views of the recipients of that care and those that care for them, will be received as a positive resource for psychologists in the crucial role that they play. In designing health systems the focus must be on equitable access to consumer centred, safe, high quality and timely treatment. However, Governments often have difficulties in designing what consumers and their carers perceive as consumer centred care and the mental health area is no different in this regard. This is an

opportunity for psychologists, allied mental health professionals, general practitioners, Governments and others to hear what consumers and carers think about the proposed Australian Health Reform Agenda and mental health in particular and how psychology fits into that process.

Communicating for change: Motivational Interviewing in the workplace

MENTHA, H. (Private Practice)

Motivational Interviewing emerged over 25 years ago in the addictions field. Since then, it has raised relevant questions and offered practical strategies to help us communicate more effectively across the change process from resistance to action. Over 200 published research studies have examined the use of MI in more traditional applications within counseling, medical and correctional services. But what can MI offer in more corporate settings? This practical session provides a taste of MI and how it can facilitate effective communication in the workplace.

Development of the National Registration and Accreditation Scheme in Australia

GRENAYER, B. (Psychology Board of Australia), ALLAN, A. (Edith Cowan University), STARK, A. (Private Practice), GALLAS, G. (Defence Force Psychology Organisation)

This panel will provide an overview of the recently introduced National Registration and Accreditation Scheme for the Health Professions (NRAS) in Australia including the functions of the newly formed Psychology Board of Australia (PBA). The Chair of the Psychology Board of Australia will provide an overview of the Scheme and its underpinning legislation, followed by brief presentations from Board members on key aspects of the registration system. The Executive Director of the Australian Psychological Society will provide a presentation on the impact of the Scheme for Australian psychologists, followed by a question and answer session. Participants include: Brin Grenyer, Chair of the Psychology Board of Australia, members of the Board Ann Stark, Geoff Gallas and Alfred Allan, and Lyn

Littlefield, Executive Director of the Australian Psychological Society.

Genocide: Confronting the unthinkable

JONES, J. (Australia/Israel & Jewish Affairs Council), SLOVIC, P. (Decision Research), TATZ, C. (The Shalom Institute), KAPLAN, I. (Victorian Foundation for Survivors of Torture), ANDERSON, M. (Sovereign Union of Aboriginal Nations and Peoples in Australia)

Talking about genocide takes us to the heart of what it is to be human, as individuals and as members of the human collective. Genocide scholarship extends beyond the perimeters of a single discipline, and none can lay claim to a definitive explanation for 'ethnic cleansing', systematic persecution or the 'chronic genocide' of colonisation. In this forum, panelists will respond from psychological, historical, Indigenous and human rights perspectives to Professor Paul Slovic's opening keynote address that provides a psychological account of genocide, alongside its legal and institutional implications. The floor will then be opened for contributions from conference delegates, facilitated by the Chair. Central to the discussion is the social responsibility of psychologists – what role can psychological understandings play in preventing and responding to genocide? What are the pre-conditions for mass murder and deliberate annihilation of the kind and scale humanity has seen, permitted and perpetrated, particularly in the past hundred years? The psychological and political mechanisms that enable the slow development of risk factors over time, and the failures of "genocide lessons" in the 20th Century, will be discussed. The forum will look beyond the psychology of perpetrators to consider the propensity for humans to turn their back on genocide, and the processes involved in dehumanization and large-scale bystander effects. Survivors' voices will be presented as a counter to the distancing and minimisation that typically occurs. The designation of 'worthy and unworthy' victims is under-researched, and this 'blaming the victim' rhetoric remains post-genocide, often directed towards Indigenous peoples, and refugees. The meaning of recovery for survivors and their communities is fraught, especially when survivors live alongside perpetrators, individually

and collectively. What are the obligations of professionals, institutions and civil society in combatting a sense of impunity for perpetrators and the dehumanization of mass victims? The limits to human compassion, the need to strengthen international law and the problems associated with an enhanced, inward-looking sense of nationhood will be discussed, as well as the implications for other mass tragedies, such as poverty, famine, disease, and environmental destruction.

Global perspectives on undergraduate psychology education: Should we be changing our game?

CRANNEY, J. (University of New South Wales), TRAPP, A. (United Kingdom Psychology Network), SARWONO, S. (Persada Indonesia University), MCCARTHY, S. (Northern Arizona University, Yuma), SKINNER, N. (King's College at the University of Western Ontario)

What are our objectives for undergraduate psychology, and should these be reexamined in light of our students' global futures? Given the objectives, what kind of curriculum and educational practices will facilitate achievement of those objectives? This panel discussion will inform the audience of international trends in undergraduate education, discuss and record ideas about what should (and should not) be key aspects and content of the undergraduate psychology curriculum, and discuss and record ideas about how university educators can best work together to maximise quality student learning outcomes.

Going global with Lesbian, Gay, Bisexual and Transgender Issues: How psychology can contribute

SCHLITTLER, R. (International Network on Lesbian, Gay, & Bisexual Concerns and Transgender Issues in Psychology), ANDERSON, C.W. (American Psychological Association), BULLOCK, M. (American Psychological Association), CERBONE, A. (American Psychological Association), RIGGS, D.W. (Flinders University and The University of Adelaide)

Global attention to human rights issues and concerns of Lesbian, Gay, Bisexual and Transgender (LGBT) populations is increasing

rapidly in ways both favorable and alarming. This panel will consider psychology's potential role in research, clinical practice and application initiatives in this cutting edge arena, particularly as it relates to potential impacts on organizational and state policy. From a vote in the UN General Assembly on a non-binding statement in December, 2008, calling for international agreement on decriminalizing homosexuality, to legislative efforts in Uganda in 2009 to enhance criminalization of same-sex behavior to include the death penalty – as well as to criminalize family, neighbors, colleagues and health care professionals who don't promptly report suspected homosexuals – the mental health and well-being implications are urgent and far reaching. At stake in this debate are not only matters of human rights as they pertain to LGBT populations per se, but also the crucial intersections as they relate to civil society, women's development, health/sexual health/HIV-AIDS prevention and children and families – all rich terrain for research, practice and application. The purpose of the panel is to bring attention to this rapid global increase in attention, and to promote awareness of the aims of the International Network on Lesbian, Gay and Bisexual Issues and Transgender Concerns in Psychology. Its aims include promotion of cross-cultural collaboration and application of research among psychological researchers and practitioners concerned about the mental health and well-being of LGBT populations through discussion of, and action on, specific goals for organizational and state policy, clinical practice, and various application initiatives. Specific examples will be considered, including one network member organization's involvement in LGBT issues and the network, and LGBT issues and concerns related to policies and initiatives of the International Union of Psychological Science. The scope and nature of this topic are most closely related to IAAP Divisions 3, 8 and 10. Panelists are all actively involved in the network as well as other international organizations in psychology working to promote the connections between research, policy, and healthy mental health and well-being outcomes for LGBT people and their families.

Health impacts of climate change

PRIOR, M. (University of Melbourne), WISEMAN, J. (University of Melbourne), BURKE, S. (Australian Psychological Society), ARMSTRONG, F. (Private Practice), LIDDELL, B. (University of New South Wales)

This forum will explore the health impacts of climate change, with a specific focus on the mental health and psychosocial impacts. Climate change impacts in three major ways on people's mental health. In this forum, we will explore the direct impacts on health from natural disasters and extreme weather events, including consequences for environmental refugees, events that are predicted to increase in frequency and severity, and which are attributed in large part to our changing environment. Next we will examine the impacts of climate change (and mitigation and adaptation policies) on the social, economic and environmental determinants of mental health and wellbeing. Finally, we will explore the range of psychological responses to learning about climate change, from avoidance to anxiety to action, and look at the barriers and motivators for pro-environmental change at an individual, community, and political level. In acknowledging these significant health and wellbeing impacts, the APS is taking a leadership role in supporting research and action on the psychosocial impacts of climate change, and what we can do about it.

Health management of psychologists and their professional practice

GORDON, A. (Private Practice), CELI, E. (Elements Integrated Health Consulting), WADE, T. (Flinders University), FRANKCOM, K. (Psychologists Registration Board of Victoria), LEE, J. (Relationships Australia), STEVENS, B. (University of Canberra), MOORE, B., BECKERMAN, D. (California Psychological Association), ERNST, B. (Australian Psychological Society), ALDER, J. (Private Practice)

Psychologists face the same types of life pressures as their clients while also researching, reflecting, responding, and reviewing the behaviors of their clients and members of the public generally. These multiple levels of experiencing stress and trauma by psychologists may challenge, inform and/or impair professional practice. A substantial range and

depth of research has been published on health issues of psychologists in the United States, and represented by the Collegial Assistance operating in California. The diversity in panel members enables various research and practice approaches to be explored in discussion. The panel represents expertise in working with severe clinical clients, unhelpful belief systems of therapists, health practices of psychologists, reflecting on family "dreams" of therapists and clients and dealing with claims of malpractice. The panel discussion aims to outline a range of health issues affecting the professional practice of psychologists and explore further unidentified health issues of psychologists. It will also consider the approaches to monitoring and intervening with psychologists impaired by health issues and the approaches to health maintenance and recovery of psychologists. Dr. Elizabeth Celi has been a privately practicing psychologist, both inner city and regional, for 7 years. Having diversified her business further with professional speaking and a Personal Training franchise (2003-2006), diligent self care has been a core agenda item. The vital mental and physical energy management required for the intricacies of a psychologist's work will be emphasized with strategies for developing a sustainable self care schedule. Professor Tracey Wade trains postgraduate clinical psychology students in Cognitive Behavior Therapy (CBT) at Flinders University in South Australia and also supervises students and psychologists in therapeutic work in eating disorders. She has worked as a clinical psychologist for over 20 years and works predominantly in a CBT framework. Over the last 7 years she has been conducting research into the types of beliefs about therapy that therapists can hold that may be unhelpful for their stress and burnout. Kaye Frankcom has been involved in regulating the psychology profession as President of the Psychologists Registration Board of Victoria and more recently as the Victorian appointee to the Psychology Board of Australia. She is a proponent of therapeutic jurisprudence. The balancing of the protection of the public and supporting an impaired psychologist to continue to practice safely has been a common theme in her work in health regulation. Dr Jamie Lee has worked for Relationships Australia (SA), South Australia's largest non-government provider of health and community services, since migrating

to Australia in 2006. His clinical role is in family relationships counselling, in particular with children and their families after parental separation. He also has responsibility for coordinating research projects across Relationships Australia (SA) and has an interest in client assessment and outcomes research. Jamie is a member of the Australian Psychological Society's College of Counselling Psychologists. Dr Bruce A Stevens (PhD Boston University 1987, MAPS Clinical and Forensic Colleges) founded Canberra Clinical and Forensic Psychology in Canberra in 1995. He is an Associate Professor in clinical psychology at the University of Canberra (and SCD). He has lectured in the DClinPsych program at Australian National University and has supervised clinical students from both universities. Dr Stevens has a research position at Charles Sturt University and has written four books, including *Mirror Mirror* (2001) on how personality disorder affects intimate relationships and *Cross Fire!* about cross examination skills for psychologists (Australian Academic Press, 2008). He is also a member of the national private practice advisory group and the governance review committee for the Australian Psychological Society. Dr Bernadette Moore has over 17 years experience as a psychologist. She retired in 2008 from her position as Associate Professor of Psychology at Victoria University and was subsequently appointed Director of Psychology for Central Queensland Health Services. As a clinical psychologist, who also manages a private practice, Dr Moore has a long standing interest in the interaction between a psychology practitioner's personal experiences of depression and the impact of that experience on subsequent therapeutic practice. Dr Dani Beckerman, Psy.D., has chaired the California Psychological Association's Colleagues Assistance and Support Program (CPA CLASP) since 2005 and has served as a CPA BOD representative, as well as acting as the 2004 President of the Monterey Bay Psychological Association. She has a private practice in Santa Cruz, CA specializing in self care, personal growth and intimacy. Dr. Beckerman is very active in developing collaborative communities of support and consultation groups for health care professions in her community. Currently in collaboration with APA ACCA, she is investigating the state of well-being, obstacles to obtaining

support, protective/risk factors as well as preventive/interventions facing psychologists in the US. Furthermore, she has taught and continues to train students, psychologists, therapists, and psychiatrists on group process, self care for health care professionals, and sexuality and desire issues across the Bay area. Bev Ernst, Private Practice Advisor, Australian Psychological Society (APS) has been a central figure in the APS Health Issues of Psychologists Task Force, contributed to the development of the APS Peer Supervision Group networks across Australia and overseen developments on the professional society's website to include issues of self-care.

Health reform in Australia and the United States

LITTLEFIELD, L. (Australian Psychological Society), KNOWLES, R. (Health and Hospitals Reform Commission), NORDAL, K. (American Psychological Association)

Australia is going through a period of significant health reform to meet the needs of an ageing population and an increasing burden of chronic disease. The Australian Government has committed to delivering better health outcomes for the community and the provision of sustainable improvements in the performance of the health system. Three separate bodies were established to review the major components of the Australian health system: the National Health and Hospitals Reform Commission (NHHRC), the National Primary Health Care Taskforce (NPHCT) and the National Preventative Health Taskforce (NPHT). The Federal Government has responded to their recommendations by taking over much of the funding for health care, including primary health care and the hospital system, restructuring the primary care system and focusing on preventative health care. The first paper in this forum, presented by The Hon. Rob Knowles, a member of the NHHRC, will outline the major recommendations of this Commission and the Australian Government's response to date. The second paper, presented by Professor Lyn Littlefield, a member of the NPHCT, will outline the Government's response to the Taskforce's recommendations, focusing on the area of mental health and the potential impact on

psychologists. The third presentation by Dr Kathryn Nordal, the Executive Director of the Practice Directorate at the American Psychological Association, will outline the current health reforms in the US. Her paper is titled 'The Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act (MHPAEA) and the Patient Protection and Affordable Care Act (PPACA): Implications for health care practice for psychologists'. These papers will be followed by open discussion with the panel.

High school psychology and first-year university psychology: Challenges and opportunities

PROVOST, S. (Southern Cross University), BOWLES, T. (Australian Catholic University), CARROLL, P. (Department of Education, WA), MARTIN, F. (University of Tasmania), REECE, J. (RMIT University), SKINNER, N. (University of Western Ontario), TRAPP, A. (UK Psychology Network), VOUDOURIS, N. (Australian Psychological Society)

Some of the challenges include constructing a national curriculum for psychological science, supporting high school teachers in psychology, and catering for first-year university psychology students who have, and have not, studied high school psychology. This panel discussion aims to inform the audience of national and international issues regarding high school psychology, and to discuss and record ideas about what should (and should not) be key aspects and content of a national high school psychology curriculum. We will also discuss and record ideas about how high school and university educators can best work together to deliver quality student learning outcomes across secondary and tertiary psychology education. Steve Provost, Southern Cross University, has undertaken research into high school psychology teachers in Australia. Terry Bowles, University of Ballarat, is the chair of the APS College of Educational and Developmental Psychologists, and has worked with high school teachers in Victoria. Paula Carroll, Department of Education, Western Australia, is leading the implementation of the new psychology curriculum in WA schools. Frances Martin, University of Tasmania, is involved in outreach to high school teachers in Tasmania, which was

the first state in Australia to introduce high school psychology. John Reece, RMIT University, has conducted research into high school psychology in Victoria, which has the largest number of high school students undertaking psychology. Nicholas Skinner, University of Western Ontario, will give a brief Canadian perspective. Annie Trapp, Director, UK Psychology Network, has undertaken research into high school psychology in the UK, and Nicholas Voudouris, Australian Psychological Society, has been involved in discussions regarding the Australian National Curriculum for Psychology.

Human rights' issues confronting psychology in the 21st century

COOPER, S. (Psychological Society of South Africa),
BEHNKE, S. (American Psychological Association),
GAUTHIER, J. (Laval University), NAIR, E. (Work and
Health Psychologists)

The panel will discuss varying perspectives on ethical challenges in psychology that have arisen internationally since the beginning of this century. The 27th International Congress of Applied Psychology will provide the opportunity for key actors in the ethics field to provide insight on human rights issues that have confronted psychology over the past decade, in their own countries, and elsewhere. The panel aims to focus on the interface of human rights and psychological ethics, especially in a fast changing geo-political global order that has been indelibly altered in the aftermath of the 9/11 terror.

IAAP at the United Nations

REICHMAN, W. (Org Vitality), KURIANSKY, J. (United Nations), O'NEILL BERRY, M. (Sirota Survey Intelligence)

IAAP has a significant presence at the United Nations. It has two representatives accredited to the Department of Public Information in New York and eight representatives accredited to the Economic and Social Council of the UN, five in New York, two in Geneva and one in Vienna. In addition there are a number of graduate students interning with the representatives. This

session will present samples of their accomplishments to date to bring applied psychology to all aspects of the United Nations. Three of the representatives will be a part of the session and present a short video and examples of their contributions to the UN.

Among the contributions that will be described are the promotion of the inclusion in official UN documents of such issues as mental health, substance abuse treatment, climate change, decent work and gender equality. Representatives have conducted a survey among NGO representatives at the UN on the working relationship between the representatives and the Organization. The group has conducted luncheon workshops with staff from the UN Development Program including presentations on dealing with bureaucracy, building teams, project implementation, effective communication, enhancing cooperation / collaboration, and psycho-social interventions into post-conflict and post-disaster situations. In addition the representatives are working with the kingdom of Lesotho in Africa to develop and evaluate camps for adolescent girls who are AIDS orphans including education on HIV prevention and building self-esteem and resilience. Lesotho has among the highest per-capita rate of HIV in Africa. The representatives are also involved in the further development and evaluation of a Community Center in Haiti, which aims to enhance physical and mental health among Haitian children and families. The goal of the session is to acquaint the IAAP membership with the work that has been done and our plans for the future. We will also use this session to foster collaboration with the membership by asking for their input, to make them aware of the information we provide on the IAAP website, and to set up a procedure for members to communicate with the representatives in order to expand the reach of IAAP members within the UN environment.

Internationalizing education in Work and Organizational Psychology. What competences W&O Psychologists need in a global world?

PEIRÓ, J.M. (University of Valencia), LATHAM, G. (University of Toronto), KRAIGER, K. (Colorado

State University), FRESE, M., SINANGUIL, H.,
FRACAROLLI, F., AFONSO, F.

Globalization is affecting nearly every aspect of Work and Organizational Psychology, and our post-graduate education programs need to reflect our changing reality. Curricula have adapted to integrate international perspectives and to provide students opportunities to enhance their international competencies. Many are investigating creative ways to improve their students' readiness for the global workplace. Means of globalizing graduate curricula have included: adding global content to course work, recruiting students internationally, student and faculty exchanges, research partnerships, semesters abroad, and short-term study-abroad opportunities. Each of these means has advantages and disadvantages. None appear to provide a completely satisfactory solution to the challenge of internationalizing graduate education in work and organizational psychology. This round table is a continuation of the session previously held at the European Congress of W&O Psychology and its purpose is to bring together representatives of the European Association of Work and Organizational Psychology (EAWOP), the International Association of Applied Psychology (IAAP) – division one Organizational Psychology, and the Society for Industrial and Organizational Psychology (SIOP) along with interested audience members to discuss this topic. The following questions will be directed to the panelists, and the audience will be invited to join the discussion: (1) What currently works well in the internationalization of postgraduate education? (2) What does not work well? (3) Does technology offer any special opportunities? (4) How could these three organizations (IAAP, EAWOP, and SIOP) help? The session will begin with a description of its purpose and an introduction of the participants. Questions will be directed to the participants and then to the audience. A shorter time at the end will be devoted to identify some next steps that participants and attendees want to take.

Is applicant faking really a red herring? A whopper of a fish story

GRIFFITH, R. (Florida Institute of Technology),
ZIEGLER, M. (Humboldt-Universität zu, Berlin),

MACCANN, C. (Sydney University), ROBERTS, R.
(Educational Testing Service), KUNCEL, N. (The
University of Minnesota), BACKSTROM, M.
(University of Lund)

Although personality-based selection measures have become increasingly popular, a major concern in high-stakes selection settings is that applicants may fake their responses. A decade ago, conventional wisdom suggested that applicant faking was rare (Hough et al. 1991), was a simple phenomenon adequately captured by measures of social desirability, and produced a trivial effect on the criterion validities of personality measures (Ones et al. 1996). Opinions regarding the nature of applicant faking and its impact on personnel selection have changed considerably. Faking is now seen as prevalent (Arthur et al. 2009) and reflecting a complex interaction of person specific and situational factors that influence applicant responding (Kuncel & Telegen, 2009). In addition, the effect on validity may be more substantial than previously thought (Komar et al. 2008). This panel of personality research authors and practitioners will address questions regarding the phenomenon of faking and the research efforts to untangle it from the personality measurement process. The panelists will discuss current research, contemporary views on the nature of applicant faking, and the process by which applicants alter their responses. In addition, panelists will discuss methods to reduce the impact of faking and improve personality measurement. The questions that will be the primary focus of our discussion will center on the complexity of this behavior and the assumptions that may underlie current research. Panelists will be encouraged to move beyond their empirical work and to entertain and integrate competing models of faking behavior. Finally, audience members will be encouraged to participate to stimulate further research on the topic. To address these questions we will convene a panel of six experts in applicant faking behavior from around the world. Panel members have published over 200 articles in the area of personality research, and have recently authored applicant faking papers in *Educational and Psychological Measurement*, *The European Journal of Psychological Assessment*, *The Journal of Business and Psychology*, *The International Journal of*

Selection and Assessment, and Personnel Psychology. Members of the panel have also served as co-editors of the books *A Closer Examination of Applicant Faking Behavior* and *New Perspectives on Faking in Personality Assessments*.

Meet the editor

SCHYNS, B. (British Journal of Management), WEGGE, J. (British Journal of Management), GONZALES-ROMA, V. (European Journal of Work and Organizational Psychology), DAY, D.V. (Journal of Applied Psychology), FRESE, M. (Journal of Business Venturing)

This session provides the opportunity to meet editors/associate editors of several journals such as *British Journal of Management*, *European Journal of Work and Organizational Psychology*, *Journal of Applied Psychology*, and *Journal of Business Venturing* as well as editorial board members of other journals. The contributors will give tips around submitting to their journals and there is room for question from the audience.

National and international development of peace psychology

ITO, T. (Wako University), BREThERTON, D. (Australian Centre for Peace and Conflict Studies), BOEHNKE, K. (Jacobs University Bremen), MONTIEL, C. (Ateneo de Manila University), MULUK, H. (University of Indonesia), NOOR, N. (International Islamic University), TINT, B. (Portland State University), BURKE, S. (Psychologists for Peace/Australian Psychological Society)

Psychologists have been interested in psychological aspects of war and peace since the beginning of modern psychology. During the 23rd International Congress of Psychology in Acapulco in 1984, a resolution "Psychologists for Peace" was endorsed by IUPsyS and the Committee for the Psychological Study of Peace (CPSP) was established to promote peace psychology worldwide. The most recent symposium, the 11th International Symposium on the Contributions of Psychology to Peace, was held in Coleraine, Northern Ireland in 2009. The aim of the present panel discussion is to exchange information on the state of the art and the future orientations of peace psychology in

different countries, and seek further international networking to promote the psychological studies of peace issues. Takehiko Ito, Wako University (Japan), and Honorary Professor Di Bretherton of the Australian Centre for Peace and Conflict Studies, will chair the panel discussion. Professor Ito, a founding member of the Peace Psychology Division of Japanese Research Association of Psychological Science, will introduce the peace psychology movement of Japan. Professor Bretherton is the ex-president of the Division of Political Psychology of IAAP and a committee member of CPSP. She will review the history of peace psychology from an international perspective. Klaus Boehnke, Professor of Jacobs University Bremen (Germany) and the current President of IAAP Political Psychology Division will talk about peace psychology in Germany. Professor Cristina Montiel, Ateneo de Manila University (Philippines), will discuss peace psychology in the Philippines and Professor Hamdi Muluk, University of Indonesia, will explain the graduate course in peace psychology at his university. Professor Barbara Tint of Portland State University (USA) will cover the recent topics of Psychologists for Social Responsibility and the APA Division of Peace Psychology. Professor Noraini Noor of the International Islamic University, Malaysia, will discuss topics from an Islamic perspective, and Dr Susie Burke, the national convener of Psychologists for Peace in Australia, will talk about peace psychology in Australia.

National and international perspectives on rural and remote practice

GULLIFER, J. (Charles Sturt University), DRENT, A. (Private Practice), JOHNSON, M. (Private Practice), ERNST, B. (Private Practice), CAMPBELL, P. (Private Practice), BRAY, J. (Baylor College of Medicine, Houston), IDEMUDIA, E.S. (North West University), MALONE, J. (Private Practice)

The shortage of rural and remote health practitioners is well documented. Rural and remote practice is characterised by a diversity of healthcare needs, therefore rural health professionals need a variety of knowledge and skills. According to the Australian Psychological Society (APS) Guidelines for working in rural and remote practice, working in small communities

can be both rewarding and challenging. Members from the APS Rural and Remote Interest Group has explored the 'speciality' of working as generalist practitioners through various conference symposia and consultation with its members. Commonly expressed among practitioners is the knowledge base required to offer a variety of treatment modalities and community development approaches, whilst working with the 'lifespan' of community members. Alongside the challenges are many rewards, including, but are not limited to, the diversity of psychological work, the expectation of the community to provide diagnosis, treatment and follow up, and being part of a vibrant rural community. However, it has often been cited within the professional literature and the APS Guidelines that the four most common ethical issues confronting rural and remote practitioners are 1) limits to competence in a broad range of domains, especially when working with indigenous clients; 2) boundary management; 3) confidentiality; and 4) professional (as well as personal) isolation. The aim of the panel discussion is to bring together a number of national and international practitioners to explore their experience of working or researching in rural and remote regions.

New models of primary health care – innovative interdisciplinary collaboration

LITTLEFIELD, L. (Australian Psychological Society), LOVELOCK, H. (Australian Psychological Society), RAWLINS, M. (Royal Australian College of General Practitioners), RYAN, K. (Australian College of Mental Health Nurses), SNOWDEN, T. (Royal Australian and New Zealand College of Psychiatrists)

Two unique interdisciplinary collaborations of health professionals' national associations have formed in Australia to determine how these professions can best work together for the benefit of consumers and to advocate for improved health services. The Mental Health Professionals' Association (MHPA) is a collaboration of the Australian Psychological Society, the Australian College of Mental Health Nurses, the Royal Australian College of General Practitioners, and the Royal Australian and New

Zealand College of Psychiatrists. The entities comprising MHPA have worked together on advocacy for better services for consumers and the scoping of mental health services, focusing on collaboration between their professions. In 2009 MHPA was awarded a grant from the Federal Government to work together to establish groups of mental health professionals in local areas for collaborative assessment and treatment of Australians with mental health problems. Representatives of the four professional bodies will present aspects of collaborative mental health care from each profession's perspective and the impact it can have on mental health outcomes for people with mental illness. Allied Health Professions Australia (AHPA) is a collaboration of the national professional associations representing 14 organisations and 50,000 health professionals. Through AHPA, these professions have been working together for over 10 years to share information, increase awareness of their expertise and improve multidisciplinary teamwork, particularly for consumers with chronic health problems. AHPA has conducted several joint projects and advocacy for better access to allied health expertise for health consumers. The work of AHPA will be illustrated by the outcome of a project to educate general practices about allied health professionals' skills and AHPA's advocacy efforts to influence the current Australian health reforms.

Official Launch – A Global Special Issue on Psychology and Poverty Reduction: Accelerating input from the entire field of Applied Psychology

CARR, S. (Massey University), DALAL, A. (Allahabad University), MPOFU, E. (Sydney University), LOUIS, W. (University of Queensland), FRYER, D., MCCORMACK, C., DAVIDSON, G. (University of the Sunshine Coast), MARAI, L. (University of Papua New Guinea), BURT, C. (Canterbury University), WALDEGRAVE, C. (Family Centre Social Policy Research Unit)

In 2000 the United Nations signed up to the Millennium Development Goals to reduce poverty by 2015. To stimulate innovative effective and progressive contributions by psychologists to poverty reduction, twelve different peer-reviewed journals representing

psychology from low-income, transition and OECD economies came together to collectively publish a coordinated Global Special Issue on Psychology and Poverty Reduction, with publication in mid 2010. This Panel at ICAP 2010 will debate the issues and officially launch the publications themselves (<http://poverty.massey.ac.nz/>). The Panel members and the journals they represent have these three key aims: (1) Summarise the project, including its key strengths & weaknesses; (2) Engage in accessible language through interactive discussion with an audience including development agencies and the media about intellectual, theoretical, methodological, political and ideological issues but most of all practical and policy issues in psychology applied to poverty reduction; (3) Explore, with each other and the audience, issues emerging from the project findings, their policy implications, and future applied directions. We are widely agreed that the project must not only inform theory, but mainly feed into policy and practice. Panel members' on the issues to be discussed: A total of eight of the twelve participating journals will be represented directly at the conference, plus one coordinating chair. The eight journals are represented as appropriate by their Guest Special Issue Editor(s) &/or Editor(s), as follows: (1) Psychology and Developing Society, Professor Ajit Dalal, Allahabad University; (2) The Journal of Psychology in Africa, Professor Elias Mpofu, Sydney University; (3) The Australian Psychologist, Dr. Winnifred Louis, The University of Queensland; (4) The Australian Community Psychologist, Professor David Fryer (Unemployment and inequality researcher) and Mrs. Cathy McCormack (Grassroots community activist/campaigner in poverty reduction/social justice for 2 decades); (5) Journal of Pacific Rim Psychology, Emeritus Professor Graham Davidson, University of the Sunshine Coast/ Leo Marai, University of Papua New Guinea; (6) Journal of Managerial Psychology, Professor Chris Burt, Canterbury University; (7) New Zealand Journal of Psychology, Charles Waldegrave, the Family Centre Social Policy Research Unit, Wellington, New Zealand/Aotearoa; (8) International Journal of Psychology, Professor Stuart Carr, Massey University. Each journal also has extensive experience in the practice of development-related projects, in the community, workplace,

education and a range of human services for example in health and wellbeing. All Contributors to the special issues are warmly invited to attend the session and contribute to the discussion.

Postgraduate training and accreditation: At the crossroads?

LITTLEFIELD, L. (Australian Psychological Society),
VOUDOURIS, N. (Australian Psychological Society)

The Australian postgraduate professional psychology education and training landscape has, over the past 5 years, been through an unprecedented period of pressures for change, with significant reforms to the funding of the higher education sector still to come. As a result, tertiary professional training pathways have now reached a crossroads. Professor Littlefield will present an overview of Australian postgraduate education and training pathways for psychologists, including recent trends and likely future pressures and developments. Dr Nicholas Voudouris will present an overview of the Australian accreditation system for professional postgraduate courses and outline some of the challenges of an increasing emphasis on the assessment of competencies in the education of psychologists.

Psychological assessments, reporting and testimony in the family court: Protocols, best practice and dilemmas

KENNEDY, S. (Behaviour Work Group), NEOH, J. (Private Practice), PAPAEO, V. (Private Practice), LIST, D. (Private Practice), WATTS, P. (Private Practice)

This panel discussion will address best practice issues in psychological assessment for experts in the Family Court and other practitioners whose role it is to provide psychological evidence to the courts. The focus of the panel will be on providing a framework of best practice in aspects of psychological involvement with the courts. There will also be a focus on protocols for reporting, and a framework provided for the provision of testimony. Dilemmas associated with this complex area will be raised with practical solutions to these issues. The five

discussants individually and collectively have extensive experience as experts in the family court, present regularly on these issues and will address common dilemmas faced in this process of reporting to the family court.

Psychologists in the media

GORDON, A. (Private Practice), CARR-GREGG, M. (Private Practice), BRECHT, G, KURIANSKY, J. (United Nations), LAIDLER, T. (Private Practice)

The experts reveal all – including some bloopers. Panellists will address the questions: Do I need training to work with the media? How do I ensure I give interesting, informed, and psychologically sound comment? How do I stop being railroaded by reporters and journalists? When is a story too flippant or controversial to be involved? When do I say no to an interview? When do I contact media people to make comment? How can I best promote psychology and the services it has to offer by using the media? What can I do if the media misquotes me? When/how should I ask to see a draft before okaying publication or the airing of my comments? The panel of experts include Amanda Gordon, former APS President and last Director of Communications and founder of National Psychology Week with over 12 years experience as media commentator, advice columnist and author, including ABC's Latenight; psychologist and regular media personality Dr Michael Carr-Gregg, who has extensive experience in the media and is currently a regular on Neil Mitchell's morning program on radio 3AW, Sunrise on Channel 7 and various print media; Grant Brecht, founding member of the Employees Assistance Professionals Association of Australia and the Australian representative on the Advisory Board for the Global Symposium for Mental Energy in the work-place, and a member of the Club of Geneva, based in Geneva, Switzerland; Dr Judy Kuriansky, United Nations representative for the International Association of Applied Psychology and the World Council for Psychotherapy, a pioneer of radio call-in advice and internet advice and former television reporter; and Associate Professor Terry Laidler, forensic psychologist, process facilitator and communications consultant, Chair of the

Victorian Mental Health Reform Council and presenter on ABC radio for more than 10 years.

Psychologists working in difficult settings: Immigration Detention Centres

GORDON, A. (Private Practice), NEWMAN, L. (Royal Australian and New Zealand College of Psychiatrists), LIGHTFOOT, T. (Victorian Refugee Health Network), SINGLETON, G. (Royal Australian and New Zealand College of General Practitioners)

In 2010, Australia continues a policy of mandatory detention for all people who arrive in the country without a valid visa, prior to health and security checks. In its "New Directions" policy (dated 29 July 2008) the Government puts a strict limit on the term of detention, insisting that it be of the shortest possible duration, and that detention past the six months mark is subject to review and audit by the office of the Ombudsman. In the past decade, Government policies have led to systemic failures, whereby there have been cases of mistaken identity of those with a mental illness, misdiagnosis of mental illness and relabeling it as a 'behaviour management problem', and countless cases of detained asylum seekers having been traumatized, and having had their mental health compromised, as a result of prolonged detention. In 2006, stakeholders from the medical and psychological arena were brought together and agreed to form the Detainee Health Advisory Group (DeHAG) to the Federal Department of Immigration and Citizenship (then the Department of Immigration and Multicultural Affairs). Comprising representatives from the Australian Psychological Society, Australian Medical Association, Royal Australian College of Psychiatrists, Royal Australian College of General Practitioners, College of Nurses, Torture and Trauma Services and the Public Health Association, the DeHAG established itself as a committee of audit and review of Government policies to do with health in detention centres. Two working groups were formed: The Mental Health Subgroup and the Infectious Diseases Subgroup. In mid-2009, the Mental Health Working Group presented three Policy Frameworks to the DeHAG for endorsement: The Mental State Screening Policy; The Psychological Support Programme; and Support

for Victims of Torture and Trauma Policy. Rollout of these new policies throughout Australian Detention Centres began in February 2010, and continues. The policies reflect a significant cultural shift to the workings of Australian Detention Centres, demanding a Health Promotion, Prevention and Early Intervention approach. Case conferencing is key to ensuring that those in detention are provided with the least traumatizing experience while in detention, and a view of setting a low bar in the capture of those with histories of torture and trauma is facilitated. This panel will firstly explore the health of those in detention and discuss the policies and the training required for the roll-out and cultural change inherent in them. Secondly, the provision of services and promotion of mental health initiatives and early intervention in Australian Immigration Detention Centres and the political issues that can be obstacles to achievement of positive outcomes will be discussed.

Quality practice: Creating a measure of success (PPMS)

STOKES, D. (Australian Psychological Society),
MATHEWS, R. (Australian Psychological Society)

In 2007, following wide consultation and a research trial, the APS developed the Private Practice Management Standards (PPMS). Supporting material was also developed including a self-assessment tool and resources for practitioners in private practice to evaluate and improve service provision. To date, over 2000 psychologists have completed the online self-assessment. The PPMS is currently being reviewed and updated in line with the many changes taking place in the Australian context. With the introduction of external practice accreditation for psychologists expected in the near future, and the development by the Australian Commission on Safety and Quality in Health Care of the National Safety and Quality Framework, the PPMS provides a foundation for an accreditation process. This workshop provides an overview of the PPMS, provides data to demonstrate psychologists' areas of strength and weakness, and provides an opportunity for practitioners to complete sections of the PPMS as it applies to their practice along with

discussion of resources and strategies to improve their practice management.

Screening, assessment and treatment of problem gambling: A research, clinical and client perspective

DOWLING, N. (University of Melbourne), CLARKE, J. (Gamblers Help (City)), JACKSON, A. (University of Melbourne), MCKENZIE, J. (Gamblers Help (City))

This panel presentation draws together expertise from problem gambling research and treatment specialists to provide an overview of best practice in the screening, assessment, and treatment of problem gambling. The panel proposes to discuss the recent models for problem gambling that have influenced the clinical formulation of problem gambling; the use and evidence for problem gambling screening and assessment instruments; early interventions and referral; the research evidence for psychological and pharmacological interventions; emerging interventions for problem gambling; and the limited evidence on which interventions work for whom. The panel also includes a previous client of a problem gambling treatment service who will provide a unique client perspective on the treatment of problem gambling. The panel discussion aims to provide an overview of screening, assessment and treatment of problem gambling from a research, clinical, and client perspective. Dr Nicki Dowling is a Senior Research Fellow in the Problem Gambling Research and Treatment Centre (PGRTC), Melbourne, Australia. She has been involved in gambling research for over 10 years and has widely disseminated research findings in journals, conferences, and professional development seminars. She has also been a problem gambling counselor at Gamblers Help City for 7 years and is an invited member of the Responsible Gambling Ministerial Advisory Council Research Working Party (Victorian Department of Justice). She is a registered psychologist, a member of the Australian Psychological Society, and a member of the Clinical College of the Australian Psychological Society. Ms Jodi Clarke has been a psychologist (problem gambling counselor) at one of the Victorian problem gambling treatment services (Gamblers Help City) for 9 years. She is currently delivering presentations on current best practice

screening, assessment and early intervention for people with gambling problems for health providers within the City of Melbourne. She completed her Master of Health Psychology in 2002 and is a member of the Australian Psychological Society. Prof Alun Jackson is Director of the Problem Gambling Research and Treatment Centre at the University of Melbourne. The Centre has been established as a partnership between the University of Melbourne, Monash University and the Victorian Government to create an international centre for excellence in the field of problem gambling treatment and research. He had been involved in gambling research for over 10 years and has been involved in the design and direction of many large-scale gambling-related research programs. He is widely published in gambling research, is a member of the International Think Tank on Gambling Research, Policy and Practice, a member of the Victorian Independent Gambling Research Panel, and several Responsible Gambling Ministerial Advisory Council Working Parties (Victorian Department of Justice). Mr Jim McKenzie is a previous client of one of the Victorian problem gambling treatment services (Gamblers Help City) and has participated in the Spokesperson's program at that service. This program was designed to train previous clients of the service to speak with media and deliver presentations about their gambling problems and their experiences of problem gambling counseling.

Societal development, peace and democratic governance: Topics of applied psychology

BOEHNKE, K. (Jacobs University Bremen),
YAMAGUCHI, S. (University of Tokyo),
BREHERTON, D. (Australian Centre for Peace and
Conflict Studies), ITO, T. (Wako University),
KAGITCIBASI, C. (Koc University), BERRY, J. (Queens
University)

Currently the International Association of Applied Psychology (IAAP) has two divisions that center around topics related to political issues: Division 3, "Psychology and Societal Development," formerly named "Psychology and National Development," and Division 11, "Political Psychology," which is largely devoted to Peace Psychology questions. Historically

Division 3 has anti-colonialism roots, whereas Division 11 has its roots in peace activism. The aim of the panel is to discuss whether an organizational split into two divisions continues to be desirable in view of the necessity to strengthen the basis of applied psychology in the field of societal development, peace, and democratic governance. Panelists include officers of the two divisions, the current presidents (co-chairing the panel), and two international scientists of outstanding acclaim, Cigdem Kagitcibasi and John Berry, who have always been seen by the scientific community as engaged in applied psychological research of high political relevance.

Squalor and compulsive hoarding. What can the community and community services do?

STEKETEE, G. (Boston University), Frost, R. (Smith College), Kyrios, M. (Swinburne University of Technology)

Squalor and compulsive hoarding are associated with many challenges for community services, local councils, housing services, and health and mental health workers, as well as being linked to increased risk of fires, hygiene issues, and quality of life. Government policies for the management of risks and issues associated with squalor and hoarding are being developed, but models of intervention and skills sets for case workers remain poorly developed. The Panel/Symposium on Squalor and Compulsive Hoarding in the Community Context will consist of talks by 3 local experts: (a) Julie Harris [Community Ageing Strategist] from Metropolitan Fire Brigade; (b) Dr. Chris Mogan [clinical psychologist] from the Melbourne Clinic; and (c) Dr. Sook Mee Ling [psychiatrist] from Aged Care Services in Victoria. Discussion about strategies for managing squalor and hoarding in the community and for the dissemination of evidence-based approaches to such management will be led by two of the world's foremost experts on compulsive hoarding, Professor Randy Frost (Harold & Elsa Israel Professor of Psychology, Smith College, USA) and Professor Gail Steketee (Dean, Department of Social Work, Boston University, USA). The session will be chaired by local expert Professor Michael Kyrios (Swinburne University).

Metropolitan Fire and Emergency Services Board - Hoarding and Squalor

Harris, J. (Metropolitan Fire and Emergency Services Board)

Metropolitan Fire and Emergency Services Board developed and supervised a study into hoarding related fire incidents and fatalities occurring over a ten year period. The aim was to identify common features including cause, demography and comparisons with other residential fires. This presentation will outline MFB's emergency response experience in relation to hoarding and squalor. It will also include the results of the study and how this information has been utilised in the development of fire risk reduction advice for residential hoarding.

The psychology of compulsive hoarding

Mogan, C. (The Melbourne Anxiety Clinic)

Compulsive hoarding is an under-recognized yet complex and pervasive psychological problem that dominates sufferers' time, living spaces, relationships and safety. Hoarding has been associated with a number of disorders, especially Obsessive-Compulsive Disorder (OCD), but it is not clear whether the presentation of hoarding phenomena differs across disorders. This paper will present (1) the phenomenology of compulsive hoarding, including its definition, etiology, age of onset, course, and (2) measures of severity, specific cognitions and behaviours, as well as (3) factors predictive of compulsive hoarding that emerged in recent research. The DSM-IV-TR (2000) currently fails to clearly distinguish compulsive hoarding with the only reference to hoarding being as one of eight diagnostic criteria for Obsessive Compulsive Personality Disorder, with no mention at all in the descriptions of Obsessive Compulsive Disorder. Hoarding and related phenomena was studied in 109 participants from 5 cohorts (hoarders with OCD, hoarders without OCD, OCD without hoarding, anxious and healthy controls). Results were consistent with previous findings, supporting the presence of hoarding symptoms across both clinical and non-clinical cohorts, and the clear differentiation of compulsive hoarders from clinical groups (OCD, anxiety) and normal

controls. In general, findings supported the CBT model of compulsive hoarding and highlighted the need for ongoing research into this disabling psychological construct. Finally, the paper will discuss current treatment options, both individual and group-based, the importance of long-term treatment, assessment of individual context, and the therapy-interfering behaviours that impact both on the effectiveness of the interventions and the psychological health of the workers involved in hoarding.

Hoarding associated with squalor: Western Aged Care Assessment Service working model for field staff

Lee, S. M. (Western Health)

Patients with hoarding and squalor are increasingly referred to the Aged Care Assessment Services (ACAS). The responses can be variable depending on the individual assessors' experience, knowledge and attitude towards the condition. This paper will present the working model at Western ACAS (WACAS). WACAS draws upon its multidisciplinary members in the assessments of these patients. When cognitive, physical or psychiatric illnesses are present, the person is referred for appropriate treatment. When an intervention is indicated in order for the person to remain in their home, WACAS undertakes the role of coordinating the intervention and obtaining the appropriate consent. For our patient cohort, time is usually limited due to competing pressures. The key to success lies in the accurate assessment of the patient, the environment and the task at hand. Pre-intervention planning is necessarily detailed and frontline staff are briefed prior to the intervention. During the clean-up, two WACAS staff are on-site in addition to the cleaners to troubleshoot unexpected events and provide counselling if required. WACAS performs a follow up visit and chairs a debriefing session for frontline staff prior to a formal handover to community service providers. The WACAS model was formed based on a combination of currently available evidence, experience and resources. WACAS has formed partnerships with non-government organisations in order to fund and

facilitate the intervention. The long-term feasibility of such partnerships is uncertain.

Standards for Executive Coaching – The impossible becoming probable

WHYTE, A. (Standards Australia), CAVANAGH, M. (Committee member Coaching Guideline Working Party MB-00906 - Standards Australia), ZARRIS, P. (Committee member Coaching Guideline Working Party MB-00906 - Standards Australia)

The Standards project is on schedule to produce a first draft for public comment in August this year. It is an exciting and remarkable project of interest locally and is being followed by colleagues in Canada, China, Europe, New Zealand, Singapore, South Africa, South America, the UK and USA. We will talk briefly about the areas addressed by the Guidelines: scope, definitions; context; types of coaching; coaching knowledge and competence; initial training, continuing professional development and supervision; the coach client relationship including confidentiality, assessment instruments, coaching within one's expertise, referral and mental health; ethics; purchasing and contractual arrangements and evaluation. This session will provide you with a chance to talk about your expectations of such a Guideline and to raise issues. Working party members including Ann Whyte, Michael Cavanagh and Peter Zarris will be present to answer questions and share some of the learning journey that has kept the group engaged and motivated over the last year.

Supporting health professionals to eliminate the use of restraint and seclusion in the disability sector

LOVELOCK, H. (Australian Psychological Society), MATHEWS, R. (Australian Psychological Society), MCVILLY, K. (Deakin University), WEBBER, L. (Department of Human Services), TUCKER, M. (University of Queensland)

There is a long history of inappropriate use of restraint and seclusion with people with disabilities. Health professionals working in the disability sector would benefit from resources and training on interventions that have the scope to reduce or even eliminate the use of

restrictive practices. The APS, in collaboration with experts in the disability field, has produced a set of guidelines to inform health professionals about principles and strategies for the utilisation of evidence-based psychological interventions to reduce the use of restraint and seclusion in the disability sector. These guidelines are applicable to a range of health professionals and have relevance across health care settings (e.g., aged care, forensic settings). The aim of this workshop is to provide strategies for applying these guidelines in practice. In particular, the workshop will focus on the development of a behaviour support plan based on a comprehensive functional behaviour assessment and analysis.

The APS Reconciliation Action Plan

MONTGOMERY, B. (Australian Psychological Society), DUDGEON, P. (University of Western Australia), GRIDLEY, H. (Australian Psychological Society), JONES, T. (Private Practice), HARNETT, P. (University of Queensland), RICH, B. (Private Practice)

One of the four planks of the APS Strategic Plan is to 'actively contribute psychological knowledge for the promotion and enhancement of community wellbeing', which involves ensuring that the public interest is always prominent in APS policy and decision making. Two years on from the Prime Minister's Apology to the Stolen Generations, and as part of its commitment to Indigenous health and wellbeing, the APS Board is working in partnership with the Australian Indigenous Psychologists Association (AIPA) to engage in a reconciliation process as an organisation. In initiating this partnership, AIPA suggested that the APS consult Reconciliation Australia as the peak national body building and promoting reconciliation between Indigenous and non-Indigenous Australians for the wellbeing of the nation. One of Reconciliation Australia's key strategies for achieving this goal is to support and encourage organisations to undertake a reconciliation action plan (RAP) – see <http://www.reconciliation.org.au/home/reconciliation-action-plans>. Two core principles for developing strong RAPs are recommended: (1) Ensure shared ownership across all levels of an organisation and involve as many people as

possible in the process; and (2) Indigenous collaboration – listening to and learning from Aboriginal and Torres Strait Islander people is an essential part of the process. This forum will take the form of a progress report on the development of the APS plan to date. Presenters will include spokespersons from AIPA, APS and Reconciliation Australia.

The future definition of educational, instructional and school psychology: 2020 and beyond

BOWLES, T. (University of Ballarat), BURDEN, R. (University of Exeter), LITTLEFIELD, L. (Australian Psychological Society), MARSH, H. (University of Oxford), NENNINGER, P. (University of Koblenz-Landau), OAKLAND, T. (University of Florida), FRYDENBERG, E. (University of Melbourne)

Various forces are impacting on practitioners in the field of Educational, Instructional & School Psychology which will define the future of this specialization. Within the Australian context legislative and regulatory processes are defining the profession. Again, in the Australian context Education Psychology is a specialty with Developmental Psychology whereas this association has been separated (if it ever was joined) in other parts of the globe. At the professional level Educational Psychology fits into the intersection of research, practice, leadership and management of two separate professions: education and psychology. In some countries this means that Educational Psychologists are consulting clinical specialists. In other settings they are working side-by-side with teachers and specialist educators. In other roles they are managers and bureaucrats. Correspondingly, training for the profession is very diverse with some countries requiring educational and psychological training to upper postgraduate levels. Given the diversity of the profession within and across different continents and national boundaries it is timely to consider what the future of Educational, Instructional and School Psychology might be and what will need to alter to allow for flexible development of the profession towards high standards of practice and training.

Training in organizations: Policy issues

HAKEL, M.D. (Bowling Green State University), KRAIGER, K. (Colorado State University), FRACCAROLI, F. (University of Trento), BARTRAM, D. (SHL Group Limited)

As part of the Alliance for Organizational Psychology's White Paper series, the participants are writing a training review paper entitled: Training in Organizations: Policy Issues. The paper will provide a comprehensive review of training and development in organizations, as evident from the top international journals. This review will focus on providing insights, from the evidence, as to what matters when designing, delivering, evaluating and facilitating the transfer training and development activities in organizations. These insights, translated into bottom-line assertions, will be derived from studies that here show what makes a difference to individuals, teams, organizations, and societies. These conclusions can be used to inform researchers, practitioners, executives, policy-makers and any others, whose job is to design and deliver training and enhance the skill portfolio of the workforce. The authors will discuss their goals for the white paper with the audience. The white paper is in the early stages of development. Thus, the roundtable chair and participants will seek input from the audience about directions for the paper, ideas for policy statements, and recommendations for key studies to be included.

Trauma makes good news – what clinicians need to know about the media

MCMAHON, C. (Dart Centre for Journalism and Trauma-Australasia), KEATS, P. (Simon Fraser University, Surrey), INOUE, K. (Yokohama National University), TIPPET, G. (The Sunday Age), BATES, G. (Swinburne University)

Tragedy, disaster and violence are by and large the content of daily news. This panel brings together experts from a new field of scholarly enquiry, that of 'journalism and trauma'. Few clinical studies have been undertaken in this area; however experts from Canada, Japan and Australia will present findings from research regarding the occupational hazards of work related trauma exposure on a forgotten group of 'trauma responders' – the media profession. Clinical suggestions when meeting with news

gatherers as patients, as well how to assist trauma survivors who have been 'covered' by the media will also be discussed. The panel will also discuss managerial impact on trauma exposed staff. This panel is about how to work collaboratively with journalists as professional equals and not a 'managing the media' presentation. It will be of interest to both academic researchers and those working in clinical practice. The panel discussion will introduce cutting edge research of a new, cross discipline area of enquiry from three international perspectives, create awareness into the specific needs of media professionals in the counselling room, and apply metaphors to assist the therapeutic process with journalists and photographers. It will discuss skills in assisting families and children who have been the subject of news stories, or wish to tell their stories via the media, and the panel aims to educate in being a better 'source' for journalists in regard to mental health issues for the broader community. There will also be an opportunity to enter into dialogue with clinical researchers and a working journalist about issues pertaining to news, trauma exposure and survivors covered by the media. Each of the researchers have undertaken novel research within their own countries and published groundbreaking papers on trauma and journalism from the above perspectives. They are part of a small band of international experts in this area. The award winning working journalist to present has undergone international education on the impact of trauma as it relates to the media profession and ethical coverage of trauma in society.

Trends in leadership development: How well are psychologists contributing to developing leaders for a complex future?

CAVANAGH, M. (University of Sydney), GREIF, S. (Institute of Business Psychological Research and Counseling, Osnabrueck), LANE, D. (Middlesex University, London), STOUT ROSTRON, S. (Coaching and Mentoring Association of South Africa (Comensa)), ATKINS, P. (Australian National University), O'CONNOR, S. (Sydney University)

This panel discussion will focus on the contribution of psychology to leadership development. The discussion will focus on the

nature of organisational demands in the twenty-first century as the context for which leaders need to be developed. The panel will suggest that while current models and methods of leadership development have many benefits, they tend to focus on building individual level skills grounded in the belief that the leaders primary task is to ensure specific outcomes. Rather, we suggest that leadership development needs to focus on the leader's capacity to work at meta-systematic levels, as a participant in the self-organizing emergence characteristics of complex adaptive systems. Such a concept of leadership has important consequences for models of leadership, and methods of leadership development. In particular it highlights the role of developmental psychology in understanding leader development, and suggests a greater emphasis needs to be given to process and iterative reflection based methods of leadership development such as coaching, mindfulness, and reflective practice. These iterative methods of reflection enable leaders to remain engaged with the complex changing conversations that make up today's leadership context. The aims of the panel discussion are to stimulate thinking and discussion about this critical area of applied psychology, to identify the positive and ongoing contribution made to leadership development by psychology, and to identify areas of future research and applied focus in leadership development. The panel is made up of world acknowledged experts in the area of executive coaching and leadership development and research.

What editors want: Do's and don'ts for submitting your manuscript

ROBERTSON, M. (Wiley-Blackwell Asia-Pacific), CROWE, S. (LaTrobe University), RAPEE, R. (Macquarie University), SCHWARZER, R. (Freie Universität Berlin)

Have you ever wondered what editors look for when combing through droves of manuscript submissions? Just how do you get your manuscript to the top of the pile? In this session participants will learn what editors look for when deciding which articles get considered for publication. Panel members will discuss how to avoid common mistakes when writing and submitting papers for publication. They will also

give hints and tips about topics like how to write a good abstract, citations, and more. In addition, speakers will discuss current publishing trends and publishing biases. A question and answer session will follow the presentations; presentations will be kept short in order to allow plenty of time for lively discussion. This session is aimed at students, post-docs, and early-career psychology researchers, but attendance is open to all.

What's your policy on that? The importance of developing a school psychology service policy

THIELKING, M. (Australian Psychological Society),
TINNEY, F. (Australian Psychological Society)

School psychology is recognised as one of the more ethically challenging areas in psychological practice. This can be attributed to the multifaceted nature of activities that make up the role of school psychologists coupled with the complex range of student issues that require psychological intervention. Furthermore, there are a number of stakeholders in a school setting who also have a duty of care towards students, and who the psychologist must work and consult with on a regular basis. Professional boundaries, client consent and access to records must be carefully managed by school psychologists. An individualised policy, which clearly defines the principles behind a school's psychological service, is a vital tool in defining this unique area of practice, promoting whole school understanding of the service and highlighting the professional responsibilities associated with working as a psychologist in a school setting. This workshop will present participants with a brief overview of the challenges often faced by psychologists working in a school setting. In particular it will emphasise the importance of school psychologists working with their employers on developing a school psychological service policy. Participants will be provided with much opportunity to discuss key ideas and will be assisted in developing a framework for their own school psychological service policy. This workshop will be particularly useful to school-employed psychologists, although presented concepts may be generalised to more systemic settings or to psychologists working in multiple settings.

Abstracts of the 27th International Congress of Applied Psychology

Symposia

A fair and impartial jury: Advances in measuring and moderating pre-existing juror biases

Chair(s): REES, N. (Victorian Law Reform Commission)

Discussant(s): REES, N. (Victorian Law Reform Commission)

The right of a defendant to a fair hearing is a fundamental common law right in Australia. Throughout the conduct of a jury trial, a number of available legal procedures can be invoked in an effort to ensure that juror biases are minimized and that the empanelled jury renders a fair and impartial verdict. These mechanisms include the exercise of peremptory challenges or challenges for cause, the admission of educative evidence from expert witnesses to assist jurors in understanding the facts in controversy, and the issuance of jury directions during and at the close of the trial. However, these procedures presume that pre-existing juror biases are easily discerned, and second, that they can be cured by these means. Drawing on an array of psychological experimental methods, each of these papers explores the nature of a specific potential pre-existing jury bias. These findings shed light on the effectiveness of one or more legal procedures to minimize their influence. The implications for policy reform and practice are reviewed by a distinguished discussant.

Jury-eligible citizens' mental models of negligence resulting in personal injury

SHANAHAN, C. (Air Operations Division DSTO)

Considerable research demonstrates that people possess experience-based knowledge structures of crimes that influence the manner in which information is processed at trial, but little research exists on mental models of civil law concepts. The broad aim of this study was to apply a prototype methodology to examine

the nature of jury-eligible citizens' mental models of negligence resulting in personal injury. The specific aim was to determine whether mental models of cases that end successfully for the plaintiff differ systematically from those that end unsuccessfully, particularly with regard to the severity of the plaintiff's injuries. A sample of 74 jury-eligible Australian citizens provided a description of a typical case in which a plaintiff sues a defendant for negligently causing an injury. Participants were randomly allocated to one of two conditions: cases that ended either successfully or unsuccessfully for the plaintiff. Participants' stories were coded on the principal legal elements of the tort of negligence, and on the severity of the plaintiff's injuries. The prototypical mental model extracted from participants' negligence stories provided a close match with the principal elements of the law of negligence, and mental models of cases in which the plaintiff was unsuccessful differed meaningfully from those in which the plaintiff was successful. However, few of the stories generated by individual participants referred to all of the relevant legal elements. Furthermore, participants asked to describe a personal injury case that ended successfully for the plaintiff were more likely to recount a story that involved a more severely injured plaintiff. The findings suggest that jurors deciding negligence cases may benefit from more explicit guidance to ensure that all the appropriate legal elements are considered. More significantly, they suggest that a juror confronted with a case involving a severely injured plaintiff may be predisposed to interpret the evidence presented at trial in a manner consistent with a successful outcome for the plaintiff. Further research is needed to examine the extent to which people's naïve representations of negligence cases influence decisions of liability, and the extent to which these representations are susceptible to modification.

Keywords: *experience-based knowledge structures, negligence, information processing, trial, personal injury*

CSI effects in DNA cases: expectations and outcomes

GOODMAN-DELAHUNTY, J, (Charles Sturt University)

Perceptions that DNA evidence is irrefutable in identifying a perpetrator are reinforced by its portrayal in popular television programs such as CSI: Crime Scene Investigation as reliable and definitive. Judges, lawyers and forensic scientists expressed concern that Australian juries are susceptible to CSI effects and perceive DNA profiling evidence as more definitive than it is in reality. Past studies produced mixed results: some showed CSI viewing increased scepticism of forensic evidence; others indicated that juror expectations were affected by CSI exposure, but not their verdicts. A sample of 470 jury eligible citizens viewed an online simulated homicide case lasting 35 minutes in which a forensic scientist presented evidence of an incriminating DNA match between the suspect and a crime-scene sample. The expert testimony was oral or accompanied by multimedia; a control group received no expert evidence. A pretest-posttest design assessed mock-jurors' DNA knowledge before and after the trial. Mock jurors reported their CSI viewing habits, rated the realism of CSI-type TV shows, answered multiple-choice questions about DNA profiling, and rendered individual verdicts. Approximately half the mock-jurors were frequent CSI viewers, watching the show most weeks. High perceived realism of the shows was associated with less receptivity to forensic evidence. Frequent CSI viewers placed more trust in science, were more sympathetic to the crime victim, applied a more stringent threshold of proof, were more likely to misinterpret the random match probability, were more confident in their verdicts and were more motivated to serve on juries. Mock jurors were most susceptible to the CSI effect when expert evidence was presented orally without visual aids. CSI viewing impaired jurors' use of the relevant evidence but had no significant effect on case outcomes. Although the mean educational level of more frequent CSI viewers was lower than that of infrequent viewers, when education level was held constant, frequent viewers who regarded the CSI shows as realistic demonstrated a lower level of DNA knowledge and learned significantly less than infrequent CSI viewers.

Keywords: *expert evidence, Crime Scene Investigation, forensic evidence, juror expectations, verdict*

Cognitive misers or optimizers: Juror reliance on stereotypes

MCKIMMIE, B. (University of Queensland)

To date, research has suggested that mock jurors typically use stereotypes as a ready decision-rule to help arrive at a verdict. As a consequence, counter-stereotypical defendants in the criminal justice system, such as women, are often observed to receive preferential treatment because they do not match perceivers' expectations about offenders. A series of mock jury studies were conducted. These studies involved a range of simulation techniques including written trial summaries accompanied by items of evidence, video trial recreations, and deliberating groups. For the video material, a mock trial was filmed with multiple cameras in a moot courtroom and presented via three aligned and linked video projectors. Student and community participants completed questionnaires, had their eye gaze recorded when presented with video, and had the content of their deliberations video recorded. Study 1 found that being counter-stereotypical meant mock jurors were less sensitive to the strength of the evidence against the defendant. Study 2 found that mock jurors had poorer memory for case information but better identification accuracy when the defendant was stereotypical. Study 3 found that individuating information had a greater influence on mock jurors' judgments about counter-stereotypical defendants. Study 4 found that mock jurors spent more time looking at counter-stereotypical defendants. Study 5 found further support for the notion that mock jurors focus more on the evidence for stereotypical defendants, even during deliberation. These studies as a whole suggest that the relationship between the use of stereotypes and mock jurors' evaluations of defendants is more complex than previously suggested. Rather than being cognitive misers, mock jurors appear to be cognitive optimisers who use stereotypes to extract the as much information as is possible about a case.

Keywords: *stereotypes, decision making, criminal justice system, cognitive misers, cognitive optimisers*

Keywords: *expert evidence, jury verdicts, credibility, child sexual abuse, memory*

Expert evidence and judicial directions: moderating misconceptions in a child sexual abuse trial

O'BRIEN, K. (Monash University)

Past investigations have produced mixed results on the influence of expert evidence and judicial directions on jury verdicts and assessments of the credibility of a child sexual assault (CSA) complainant. Using repeated measures, this study tested the effectiveness of two types of expert evidence and the timing of judicial directions in challenging common misconceptions about children's memory and responses to sexual abuse. First, 118 mock-jurors completed a 20-item CSA Misconception Questionnaire. Approximately 10 days later, they served as virtual jurors in a simulated criminal CSA trial in which specialized CSA knowledge was provided by an expert or via judicial directions. Expert evidence had two levels: diagnostic clinical evidence vs social framework educative evidence. Timing of judicial instructions had two levels: directions presented before the child witness testified vs during the judge's summing up. In a fifth trial condition, no specialized CSA information was included. Mock-jurors read a transcript of approximately 20 pages, assessed witness credibility, rendered verdicts and again completed the CSA misconceptions questionnaire. All four interventions significantly increased juror CSA knowledge. The more participants learned about CSA, the more likely they were to convict. Conviction rates were significantly higher in response to a judicial instruction received during the trial summation and in response to expert testimony from a clinical psychologist. Victim credibility fully mediated the effect of CSA knowledge on verdict: information about CSA presented via judicial directions or expert testimony enhanced perceptions of victim credibility, which in turn increased convictions. These results are promising for courts and policy-makers grappling with low conviction rates in CSA jury trials.

A military occupational model of mental health and psychology in the Australian Defence Force

Chair(s): HODSON, S. (Australian Department of Defence)

In 2008, the Australian Government commissioned Professor David Dunt from Melbourne University to conduct a review of mental health care in the Australian Defence Force (ADF) and transition to non-military life. The purpose of the review was to independently assess and benchmark, from mental health best practice and administrative perspectives, the current models of mental health support in the ADF, and the mechanisms of transition for those medically discharged with a mental health condition. Professor Dunt submitted his final report to the Ministers on 4 February 2009 and the report was released to the public on 1 May 2009. In his report, Professor Dunt noted that the ADF Mental Health Strategy compares favourably to the strategies of other military forces, and that the development of the strategy was "far-sighted". He noted a commitment to the development and improvement of mental health services within Defence. However, Professor Dunt also identified areas for improvement and enhancement leading to 52 recommendations. Defence is currently implementing a comprehensive plan to address the Dunt Review recommendations that focuses on ten major goals, with the primary focus on enhancing the mental health workforce to improve pre and post operational support to ADF members. This symposium will explore the military occupational model of mental health and psychology services being utilised to redevelop support for the ADF, including a greater role for psychologists in multi-disciplinary mental health teams. The key learning objectives of this symposium are: (1) Understand how a military occupational model is being applied to mental health and psychology services in the ADF and understand the combination of prevention, early detection and intervention and treatment services being

applied to reduce the impact of mental health problems and illnesses in the ADF; (2) Understand population risks and resilience associated with military service and particularly operational deployment; (3) Understand the role of cognitive behavioral training as a preventive strategy and a means of enhancing psychological resilience; (4) Understand barriers to mental health care in the ADF; (5) Explore case examples to enhance understanding of the points above.

Factors associated with psychological adjustment following operational service: the impact of 8 month deployments in the ADF

BENASSI, H. (Australian Department of Defence)

As the rate of Australian Defence contributions to international conflicts and peacekeeping efforts continues to increase, the Australian Defence Force is debating the impact of longer and multiple deployments on personnel and their families. In this study, the researchers aim to identify risk factors associated with poor psychological adjustment in Australian Defence Force personnel following operational service. In particular, it is predicted that the length of respite period between deployments moderates the relationship between length of deployment and mental health outcomes. That is shorter respite periods heighten the level of cognitive or emotional load and increases the propensity for poor mental health outcomes. A pseudo-experimental cohort design will be used with 3 cohorts (4 month, 6 month and 8 month deployments). Analysis will be conducted on post-deployment psychological screening data collected immediately post-deployment and again three to six months later. Researchers measure the predictor variable (respite period) on return to Australia, in prediction of mental health outcomes (psychological distress, posttraumatic stress and alcohol use) six months post-deployment. Researchers also intend to look at other possible moderating factors such as traumatic and non-traumatic stressors, and nature of operational service (e.g. peace enforcement or peacekeeping). Although data is still undergoing analysis, preliminary results indicate that risks

associated with operational service, such as exposure to potentially traumatic events, organisational and environmental stressors, and separation from home are associated with post-deployment psychological adjustment.

Keywords: *psychological adjustment, defence, military service*

ADF resilience training: The evaluation of a new ADF resilience training Initiative

CRANE, M. (Australian Department of Defence),
COHN, A. (Australian Department of Defence),
HODSON, S. (Australian Department of Defence),
WREN, C. (Australian Department of Defence)

In this study, the researchers examined the effectiveness of a two hour resilience training program. The program is designed to enhance coping flexibility, mental health literacy and psychological adjustment in military personnel within the Australian Defence Force. The BattleSMART (Self-Management and Resilience Training) program is based on Cognitive-Behavioural principles and emerged from a coping skills training intervention initially implemented at the Army Recruit Training Centre (ARTC), Kapooka. Research by Cohn and Pakenham (2008), conducted at ARTC indicated that the coping skills training was effective in enhancing psychological adjustment, and reducing maladaptive avoidant coping strategies. Two-hundred and seventeen Defence Force School of Signals (DFSS) trainees were given the BattleSMART program just prior to a period of increased academic stress. A longitudinal study design was used to evaluate the efficacy of the program. Twelve cohorts of trainees were measured on three occasions: (1) just prior to receiving the BattleSMART program, (2) immediately after receiving the program, and (3) three-months after receiving the program. Several measures were taken at each of these time points relating to mental health literacy, psychological well-being, coping flexibility and resilience. A repeated measures analysis was conducted examining whether satisfaction with training and the reported intention to use the training was related to changes in the critical outcome variables. Although data is still undergoing collection, preliminary analysis indicates marginally significant improvement in

coping flexibility and psychological resilience at three-months, along with a significant reduction in sleeping problems and a significant improvement in the reported confidence of trainees to assist other trainees. The findings support the potential of cognitive behavioural training as a preventive strategy and a means of enhancing psychological resilience.

Keywords: *military, Defence Force, resilience*

Early intervention, stigma and barriers to care in the ADF

MCINNES, M. (Australian Department of Defence)

The aim of this paper is to outline the stigma and barriers to care to mental health support in the ADF military and then to discuss how the Mental Health Reform process is addressing these issues. This paper will describe the changes to mental health support and services for ADF members that aim to decrease the incidence of mental health problems and better support those individuals who do develop mental health problems. As in most countries, in Australia stigma and barriers to care impact on those seeking help for mental health problems. Often there are negative stereotypes which apply to individuals with mental health problems, which in turn may lead to self stigma, that is the internalization of how the general public portrays people with mental illness and the belief in that portrayal. In the military, studies show that veterans report significant stigma and barriers to care in receiving mental health support. Mental Health Reform Process: With funding of \$83M over the next four years, the ADF will address stigma and barriers to care for those with identified mental health problems. Ways of addressing stigma and barriers to care include ensuring support options are easily understood; that there is sufficient time in a busy work schedule to access these services; that there is easy access to these services when required; and that accessing mental health services will not in itself impact adversely on career aspirations. The initial priority is improving access to care, with a 50% increase in mental health professionals in local service delivery around Australia; by creating an ADF Centre for Mental Health to develop

tele-psychiatry services, improve training and services for sub clinical cases; by creating eight Regional Mental Health Teams to better manage complex cases and training; and by increasing staff at the strategic level to review and develop policy and training resources. Increasing mental health literacy to encourage individuals to discuss mental health problems with others is another important strategy, which is addressed in resilience training through the idea of assisting mates. The Mental Health Reform program in the ADF is addressing stigma and barriers to care in mental health, including developing easier access to mental health support at all levels, with more mental health professionals in each region delivering more comprehensive services.

Keywords: military, early intervention, stigma, care

Case studies in the application of the Military Occupational Model of Mental Health and Psychology within the Australian Defence Organisation (ADO)

ORME, G. (Australian Department of Defence)

To illustrate key elements and salient outcomes of the Military Occupational Model of Mental Health and Psychology through presentation of case studies from the Australian Defence Organisation (ADO). Presentation of actual (de-identified) case studies from the Australian Defence Organisation (ADO), which follow the Military Occupational Model of Mental Health and Psychology sequentially from incident/injury through rehabilitation and recovery and return to optimal functioning; including return to duties. The outcomes and key results for a small number of case studies will be presented which inform, validate and highlight the Military Occupational Model of Mental Health and Psychology and its application within the Australian Defence Organisation (ADO). Both qualitative and quantitative data will be presented. Through the successful application of the Military Occupational Model of Mental Health and Psychology, the case studies presented will demonstrate major outcomes which have been achieved with the Australian Defence Organisation (ADO). The elements of

practical application of the model, as well as some areas for enhancement, will be discussed.

Keywords: military occupational model, mental health, Australian Defence Organisation

A relational perspective of career development

Chair(s): LEUNG, S. (Department of Educational Psychology, The Chinese University of Hong Kong)

Discussant(s): LEUNG, S. (Department of Educational Psychology, The Chinese University of Hong Kong)

A number of scholars in vocational psychology (e.g., Richardson, 1996; Whiston & Keller, 2004) suggested that vocational psychology should pay more attention to theoretical and research work that focus on the interface between work and relationship. For example, Blustein (2001) pointed out that "one of the most important and relevant contextual factors is that working is inherently social for most people" (pp.180-181). Given the primacy of social relations in Chinese communities, it is critical for research studies to include relational variables in their conceptualization so that the interface between work and relationship could be more clearly understood. This symposium aimed to achieve three different objectives. First, the presentations consisted of literature review and research studies that aimed to understand the impact of specific relational variables on career development. These variables included parental influence, parental career expectations, social support, filial piety, and psychological separations from parents. We hope that as a whole, this symposium could address the influence of these variables and advance our understanding on how they impact career choice and development. Second, all the presentations in this symposium addressed culture as a core contextual backdrop where relational variables derived their meanings. Third, we hope that the presenters could identify future directions to conceptualize the pathways of relational influences to guide research work, as well as practice implications to enlighten counseling professionals.

Parental influence on career development: An identity perspective

LI, X. (Department of Educational Psychology, The Chinese University of Hong Kong)

Among the literature related to factors affecting career development of young adults, parental influence and personal identity formation are two important perspectives that have been studied extensively (see Brown, Glastetter-Fender, & Shelton, 2000; Guerra & Braungart-Rieker, 1999; Lease & Dahlbeck, 2009; Scott, & Church, 2001; Wolfe & Betz, 2004). There were, however, few studies that aim to examine how identity development mediates the relationship between familial influence and career development. In this presentation, we want to review the career development literature that sought to understand the how family and personal identity development influenced career choice and development. Through this review of the international literature, we would like to speculate on the interactive effects of family influence and identity formation on the career development of young adults, and to propose future research direction and practice implications. The literature in the past twenty years (1980-2010) is reviewed with data-base including "PsycINFO", "PsycArticles", "Journal of Career Development", "Journal of Career Assessment", "Career Development Quarterly", "Journal of Vocational Behavior", and "Career Development International". The key words focus on "parental + identity + career". The alternative words for "parental" include "familial", "family", "parents"; for "identity" include "moratorium", "foreclosure", "achievement", and "diffusion"; for "career" include "job", "vocation", and "vocational". Family support, types of parenting styles, and different status of identity formation have intertwined impact on career planning, exploring, locus of control, career self-efficacy, decision-making and career commitment. Several demographic variables are also involved in this process, such as family social economics status, the year of students separate from parents. Key themes from the literature, including research and practice implications will be discussed. Findings tended to suggest that parents influenced the identity formation of young adults, and through that, they influenced their career development. Parental influence has a direct as well as indirect effect on the career choice of

young adults. Culture is an important factor, as parental expectations on identity and career development are likely to vary across cultures.

Keywords: *career development, parental influence, identity, adolescents, support*

A social support perspective of career choice and development

ZHOU, S. (Department of Educational Psychology, The Chinese University of Hong Kong)

In recent career development studies, relational supports have been found to play an important role in individuals' career development (e.g. Keller & Whiston, 2008; Nota, Ferrari, Solberg & Soresi, 2007; Gushue & Whiston, 2006). Even though "support" was considered as a multidimensional concept (Schultheiss, 2001), up to now, no literature review was done to analyze and synthesize different aspects of support and their effects on individuals' career development. The literature aims to fill this important gap. Articles were searched from PsycINFO, Psychology: A SAGE Full-Text Collection and ProQuest 5000 data bases with key words "support"+ "career" in article title and abstract. 62 articles were identified. The types of supports and the effects of different kinds of supports were categorized. Support came from four main sources: parents, peers, teachers and siblings. Support could be categorized with three methods: a. general support vs. career-specific support, b. active support vs. non-active support, c. content of support, which includes (a) emotion and self-esteem support, (b) offering information, alternatives, suggestions, and tangible assistant, (c) confirm individuals' own decision, choice, dreams and plans, (d) accessibility, and (e) role modeling. The salience of sources and types of support varied across different groups of people. For example, peer and sibling support (such as to confirm individuals' decision, choice, dreams and plans) was important for low SES adolescence (Ali, McWhirter & Chronister, 2005), parents and teachers' emotional support was important for minority students (Kenny & Bledsoe, 2005), and parents' emotion support was important for female students, but role modeling support was important for male students (Alliman-Brissett, Turner &

Skovholt, 2004) . Social support is definitely a multidimensional construct. In order to offer on-target career related support, one must offer the specific types of support that the person is needed and observe the target person's response and reactions. In the presentation, we will summarize the main themes from the literature and discuss research and practice implications.

Keywords: *social support, career choice, career development, role modeling, minority groups*

Parental influence on career development of university students: A filial piety perspective

CHEN, S. (School of psychology, Beijing Normal University), HON, S. (The Chinese University of Hong Kong)

Filial piety has been identified as an important culture-related variable that influenced the career development of Asian individuals (Kwan, 1999; Leung & Chen, 2009; Yeh & Bedford, 2002, 2004). However, up to now, very few research studies have examined the salience of filial piety on career choice and development. In order to fill this research gap, this study used a qualitative design to understand how filial piety influenced the career development of Chinese students studying at a Hong Kong university. A total of 20 university students including 10 students from Chinese Mainland cities and 10 Hong Kong students were interviewed. The students participated in a semi-structured interview and responded to questions on how their relationship with their parents had influenced their career and educational choices. Each semi-structured interview lasted about 1 hour. The interview questions will be presented at the symposium. A number of key themes were identified, including: loyalty to parents, need for reciprocity, parental expectations on specific career choices, support, prestige and social status, and the balance between self and family needs. The divergent and convergent themes identified from Mainland Chinese and Hong Kong students will be discussed. Future research and practice implications will be discussed. This study identified some specific ways that filial piety considerations influenced the career choice development of Chinese

university students. The findings and implications supported the notion that qualitative research methods are useful in identify specific relational influences on career development, especially from a cultural perspective (Blustein, 2001).

Keywords: filial piety, career development, career choice, parental influence

The impact of parental career expectation and psychological separation on career-decision-making difficulties

CHEN, S. (School of psychology, Beijing Normal University), HOU, Z. (School of psychology, Beijing Normal University)

In China, the influence of collectivist culture is far-reaching, and the bond between individual and family has been highly valued (Hwang, 2009; Yang, 1996). Even for adults, the impact of family is still very important (Leung & Chen, 2009). Grounded on the Chinese cultural context, the study aimed to explore the contribution of parental career expectation, psychological separation from parents on young adult's career decision making difficulties. The participants were senior-level college students who were studying at a number of major universities in the Chinese Mainland. They were administered a newly developed Parental Career Expectation Scale, a measure on psychological separation, and the Career Decision-Making Difficulties (Osipow & Gati, 1998). Students were given a short explanation on the purposes of this study and they participated voluntarily. The Parental Career Expectation Scale (PCES) was developed to measure the career expectation of students. In the presentation, we will present the psychometric properties of the instrument so that the reliability and validity of the instrument could be assessed. We investigated the predicting effect of parental expectation on career decision making difficulties, and how dis-congruence between parents' expectation and the individual's on career choice might contribute to decision making difficulties. We examined the impact of psychological separation from parents on the career decision making. A mediation and a moderation model would be compared. The effects of the global and components of psychological separation

would be examined. It was hypothesized that the Conflicting Independence component of psychological separation would be the best predictor of career decision making difficulties. The findings will be discussed in terms of future research direction and career counseling practice. We hope the findings will contribute to the development of (a) a good measure of parental career expectation that is now absent in the literature, and (b) a conceptual model for researchers to further examine how family and parents influenced the career choice of students in Chinese communities.

Keywords: parental career expectation, separation from parents, career decision-making, young people, career counselling

Addressing the challenges of cross-disciplinary and collaborative work for environmental psychologists: The Australian context

Chair(s): HINE, D. W. (University of New England)

Environmental psychologists often find themselves working in cross-disciplinary teams. When engaging in collaborative research, team members bring their own unique set of worldviews, theories and methodologies, which are closely tied to their disciplinary background and training. This often produces a context in which researchers essentially work in parallel, each relying on his or her specific disciplinary expertise to address the research problem at hand. The output from these types of collaborations can be described as multidisciplinary given that frequently there is little integration or effective cross-talk between team members. This multidisciplinary approach can be contrasted with interdisciplinary research, in which a group of researchers adhere to their own discipline-specific paradigms, but work jointly to address a common research problem, and transdisciplinary research in which research teams generate new perspectives and insights that transcend traditional disciplinary boundaries. This symposium brings together leading environmental psychologists from across Australia to discuss the rewards and challenges associated with working in collaborative research teams, the relative merits of multidisciplinary, interdisciplinary, and transdisciplinary perspectives, and the implications for the future of environmental psychology.

Framing and researching the psychological in World Heritage Areas

RESER, J. (Griffith University; University of Queensland), BENTRUPPERBAUMER, J. (James Cook University)

The presentation addresses the role of psychology in the research, planning, and management of World Heritage Areas in the rainforests of Far North Queensland. Psychology and protected area management requires not only a bringing together of relevant theory, research and applied areas of psychology and social science (e.g., environmental perception, place attachment, restoration, leisure studies, natural and cultural heritage interpretation, behavioural design, crowding, risk management, and environmental impact assessment) but collaborating and communicating with natural scientists, resource managers, government bodies, the tourism industry, conservation groups, the catchment community, and national and international visitors. Environmental psychology has the reach and breadth and body of knowledge and research findings to make a substantial contribution in such protected area and natural and cultural heritage management contexts, but requires a thoughtful and transdisciplinary approach, and a strategic and informed framing of both the research and the discourse when working in this multi-disciplinary but rarely interdisciplinary space. The presenters provide a number of windows on managing and communicating their research and 'management' roles and status as environmental psychologists in the Wet Tropics along with addressing the people side of World Heritage Area management. Noteworthy challenges included an appropriate and ecological framing of a transactional approach, bringing the human landscape into the frame, designing a methodology which captures all visitors and 'users' of such landscapes and places, working through serious language and meaning fault lines, reframing restoration and ecosystem system services conceptualisations, designing for experiences and encounters, developing a psychosocial impact assessment framework and indicators, managing virtual environments and representations, and addressing 'the role of the World Heritage Area in the life of the community'.

Keywords: *World Heritage Areas, environmental psychology, landscapes*

Finding the same wavelength: a learning journey in environmental management

ROSS, H. (University of Queensland)

If we accept that humankind depends on our local and global environments for all of Maslow's needs, psychologists and all other social scientists need to learn collaboration with the entire suite of sciences, economics and humanities to help create resilient and sustainable societies. Meanwhile many environmental scientists recognize that managing environments is largely about managing people. I will share a journey in understanding and helping to manage people-environment relationships, from when my psychology met hydrology, flowed (with other ologists and onomists) through Australian, Asia and Pacific catchments, and now live happily on the same wavelength in Moreton Bay and the Great Barrier Reef. This journey highlights mental models, resilience, and social-ecological systems. I will share strategies for successful interdisciplinary collaboration, including focusing on the problems and not the disciplines, working through personal relationships, and developing shared constructs and frameworks.

Keywords: *environmental scientists, people-environment relationships, hydrology, resilience, social-ecological systems*

What has psychology got to do with managing a coral reef?

SYME, G. (CSIRO Wealth from Oceans Flagship),
DZIDIC, P. (CSIRO Wealth from Oceans Flagship),
FULTON, B. (CSIRO Wealth from Oceans Flagship)

The Ningaloo coral reef on Western Australia's coast is the longest fringing coral reef in the world. Until recently demand for accessing it for fishing, tourism and recreation have been seen as manageable. But with the controversy surrounding a major tourism development and the rapid expansion of the oil and gas industry has led governments to invest heavily in research for the area. At last audit there were over 150 individual research projects and approximately 60 government and community agencies with a role in formulating and delivering policy and management. A major modeling effort has been attempted to integrate the perspectives of these multiple parties to encourage common perceptions and

shared knowledge. As psychologists (Syme and Dzidic), we were brought into the research program with an eye to ensuring adoption of the model by key decision makers. This seemed a relatively simple task involving listening and interacting with people to ascertain their needs. Interaction with the modelers, other researchers, decision makers and the locals, however, soon proved otherwise. From the psychological perspective it became evident that there was a need to understand the cognitive limitations of all parties in terms of interpreting ecosystem models and how social networks affected the perceptions of the environmental problems and the ability to make coherent judgments both in regard to research and policy formulation. The modeler in turn (Fulton) describes what she imagined psychology and social science could offer to making her model relevant, where it was useful and where it was not in making the model more accessible and incorporating key behavioural insights. The psychologists and the modeler conclude with suggestions as to how to make their collaboration more effective in future.

Keywords: *Ningaloo coral reef, environmental problems, ecosystem models, policy formulation*

Cross-disciplinary collaboration with research users: Making social research practical in Australian forestry

WILLIAMS, K. (University of Melbourne), DUNN, C. (University of Melbourne)

Forest management agencies (generally) seek to derive profit from forest products while maintaining a sustainable yield, adhering to environmental regulations, and maintaining a social license to carry out forest operations such as logging. In Australia, it is only in recent years that forest agencies, psychologists and other social scientists have collaborated to better understand social expectations regarding forest management. Undertaking social research in this competitive commercial context - with significant environmental and social consequences - has presented many challenges for all involved. In this presentation we reflect on the experience of researching attitudes to forest management over a nine-year period. We make specific reference to

PhD research undertaken by Caroline Dunn within the 'Communities' project of the Cooperative Research Centre for Forestry. Over a two-year period, interactions between researchers, and members of the project steering committee were explored to understand how these participants make practical meaning of social research outcomes in relation to forest management. There is not always ready agreement regarding the usefulness of studying public attitudes to forestry. While some forest agency staff welcome attitudes research as a means to better understand why people support or oppose forestry, some consider it a potential threat to company reputation or irrelevant to management decisions. Views are similarly diverse among social researchers, both within and outside of psychology. Some critique attitudes research, arguing that it reinforces unequal power relations between researchers/funders and the people under investigation, or that quantitative representation of results obscures complex meanings of forestry. We discuss these and other challenges and identify processes used to reach compatible, though not necessarily similar, understandings of the usefulness of attitude and broader social research. These include taking care to understand needs of all collaborators, providing detailed information about methods and methodological considerations, inviting feedback on research tools, identifying methods for data presentation that effectively communicate diversity of views, and reframing narratives of research findings to embrace diverse but aligned interpretations.

Keywords: environmental regulations, forest management agencies, power relations, forestry, social consequences

Adolescent health promotion

Chair(s): TOUMBOUROU, J. W. (Deakin University)

Discussant(s): RICCIARDELLI, L. (Deakin University; Chair APS College of Health Psychologists)

Relative to previous generations the time young people spend in education has gradually lengthened to extend the period known as adolescence that falls between childhood and the achievement of financial independence. The learning objective for this symposium is to increase knowledge of the current application of research and practice in health psychology to the prevention of a range of health compromising behaviours that emerge during adolescence. The adolescent health and social problems that form the outcomes examined in the four papers presented in this symposium are alcohol and tobacco use, physical inactivity and antisocial behaviour. A diverse set of strategies are used to address these outcomes including school-based parent education (Paper 1), community epidemiology (Paper 2), theory-based information dissemination (Paper 3) and peer intervention (Paper 4). The methodologies range from randomised trials (papers 1 & 3), multi-level modelling (Paper 2) and longitudinal trend observation (Paper 4). A paper by Toumbourou and colleagues will lead the symposium. This paper overviews a secondary school intervention designed to disseminate parent education in order to prevent adolescent alcohol use. The paper presents evaluation findings from an Australian secondary school trial. The second paper, by Associate Professor Adrian Kelly and colleagues, presents findings relevant to community-based tobacco prevention that emerge from a large community survey of Australian students proximal to the adolescent transition. The third paper by Professor Charles Abraham explores prospects for increasing adolescent physical activity through the dissemination of a theory-based leaflet. The final paper by Professor Steinebach and Ms Steinebach will evaluate the effects of the Positive Peer Culture (PPC) intervention that has been developed to target adolescents

institutionalised due to antisocial behavioural problems.

Random allocation to a family intervention in secondary school to reduce harmful adolescent alcohol use

TOUMBOUROU, J. W. (Deakin University), GREGG, E. (Monash University), SHORTT, A. L. (University of Melbourne), HUTCHINSON, D. M. (NDARC, University of NSW), SLAVIERO, T. M. (Swinburne University of Technology)

Substance use (alcohol, tobacco and other drug use) accounts for around 30% of deaths and a major proportion of disease burden for youth in developed nations. In Australia and many other nations, rates of adolescent alcohol misuse have escalated in recent years. Family and community factors including parental acceptance of adolescent alcohol use are potentially modifiable influences. This study aimed to use a cluster randomised trial to evaluate a universal "Resilient Families" intervention for its effect in preventing frequent and heavy alcohol use in early secondary school students. Secondary schools in Melbourne, Australia were approached and 24 consented (62% of approached), 12 were randomly assigned to be approached for the intervention and 12 monitored as controls. Students in intervention schools received a social relationship curriculum; their parents received a parent education handbook and invitations to attend parent education events outlining strategies to reduce adolescent alcohol misuse and related problems. Consent for three annual surveys was obtained for 2,539 students (56% of approached sample) with Wave 1 in 2004 (mean age 12.3 years). Data were included for all students participating in at least two of the three annual survey waves ($N = 2,354$, 93% of recruited sample). Main outcome measures in Wave 3 (2006; mean age 14.5 years) were 'lifetime' alcohol use (any alcohol consumption), 'frequent' (at least monthly) and 'heavy' use (five or more drinks in a session at least once in the prior fortnight). Multivariate logistic regression results averaged across 20 imputations assessed the intervention exposure effect, adjusting for school clustering and baseline measures. Relative to control

schools, students exposed to the intervention showed non-significant reductions in lifetime alcohol use (Adjusted Odds Ratio [OR] 0.78, 95% Confidence Intervals [CI] 0.63 - 0.98) and significant reductions in frequent (OR 0.70, CI 0.57 - 0.87) and heavy alcohol use (OR 0.74, CI 0.59 - 0.94). Increasing parent education in early secondary school appears a feasible public health strategy for reducing frequent and heavy adolescent alcohol use.

Keywords: *substance use, adolescent alcohol use, secondary school*

Multi-level and modifiable factors that underlie community variation in child tobacco use

KELLY, A. B. (Centre for Youth Substance Abuse Research, University of Queensland), O'FLAHERTY, M. (University of Queensland), CONNOR, J. (Centre for Youth Substance Abuse Research, University of Queensland), HOMEL, R. (Griffith University), TOUMBOUROU, J. W. (Deakin University), PATTON, G. C. (Centre for Adolescent Health, Murdoch Childrens Research Institute), WILLIAMS, J. (Centre for Adolescent Health, Murdoch Childrens Research Institute)

The aim of this study was to explore cross-sectional predictors of tobacco smoking that may assist prevention strategies addressing individuals within their social context. Despite considerable success in tobacco use prevention, a high proportion of young Australians initiate smoking. Using the Healthy Neighbourhoods dataset, this study tested a model of child smoking across community ($n = 30$) and school ($n = 231$) levels. Statistical local areas were randomly selected in the Australian States of Victoria, Queensland and Western Australia after stratification by SES and rurality. Student behaviour and risk and protective factors were measured by self-report for 6867 students in grades 6 and 8. Fixed and random effects at the community, school, and individual level in the prevalence of tobacco use are reported. Fixed effects were estimated for custody arrangements, school grade, school size, gender, the smoking status of key social influences (parents/siblings/peers), academic performance, commitment to school, perceived norms regarding substance use, belief in the moral order, involvement in binge drinking, and impulsivity/sensation seeking.

Exploratory analyses of 2-way cross-level interactions between these univariate predictors were also conducted. There were significant random effects at both the school and community levels, supporting the need for a multi-level model. Individual level predictors accounted for a third of community level variance and 72% of school level variance. SEIFA and regionality accounted for about half of remaining variance at the community level, but school level effects were not significantly changed by addition of community level predictors. The strongest effects were for number of friends who smoke, sibling smoking, binge drinking, and belief in moral order. Smaller significant effects were found for parent smoking (weaker effects for fathers), perceived norms, school grade, school commitment, and sensation seeking personality traits. The strongest effects were approximately 2-4 times the size of the smaller effects. In general interactions across levels of the model were non-significant. The majority of the between-school variation was accounted for by the characteristics of students attending each school and their social networks. The results point to the utility of targeting family and peer influences within identified communities, with a joint focus on alcohol and tobacco.

Keywords: *smoking, prevention strategies, tobacco use, social networks, community*

Testing leaflets designed to promote initiation of increased physical activity in schools

ABRAHAM, C. (University of Sussex), HILL, C. (Tower Hamlets Primary Health Care Trust), WRIGHT, D. B. (Florida International University)

The aim of this study was to design and test a theory-based leaflet that would result in increased physical activity among teenagers and could be easily implemented, used and sustained within classroom settings. A randomised control trial evaluated the effectiveness of a theory-based persuasive leaflet designed to encourage students to undertake at least one additional exercise session a week. Participants were 503 college students. The leaflet was written to target potentially-modifiable cognitive antecedents of

exercise specified by the Theory of Planned Behaviour (TPB). It was separately augmented with two evidence-based cognitive change techniques, resulting in three intervention conditions, leaflet alone [L]; leaflet plus motivational quiz [LQ], and leaflet plus implementation intention prompt [LII], as well as a no-leaflet control condition (C). Cognitions and behaviour were measured immediately before and three weeks after intervention. The results showed that all three leaflet interventions (i.e., L, LQ & LII) significantly increased reported exercise, intention to exercise and TPB-specified cognitions, compared to the control condition, but did not differ in their impact. Mediation analysis showed that intervention effects on exercise were partially mediated by the impact of intervention conditions on intention and that intervention effects on intention were partly mediated effects on TPB-specified cognitions. The study provides an experimental support for the Theory of Planned Behaviour and for a practical, sustainable theory-based intervention for use in schools. The results demonstrate how cognitive theory can be applied in a cost effective way to behaviour change in classrooms. Further work is required to assess the impact of such interventions on exercise maintenance and to identify combinations of techniques that could boost the effectiveness of theory-based leaflets.

Keywords: *physical activity, teenagers, exercise, students, theory of planned behaviour*

An evaluation of the effects of the Positive Peer Culture (PPC) intervention for adolescents with behavioural problems

STEINEBACH, C. (Zurich University of Applied Sciences), STEINEBACH, U. (Zurich University of Applied Sciences)

The concept of Positive Peer Culture (PPC) developed by Vorrath and Brendtro in the 1970s relies on the experience of being able to help. In focusing on mutual generosity PPC differs from other educational concepts. The current evaluation examines the impact of PPC on a range of youth development outcomes. The study aims to evaluate the effects of the Positive Peer Culture intervention on adolescents with behaviour problems. The

design involved a longitudinal study without a control group with up to seven measurements with 200 male adolescents with behaviour problems recruited from different institutions in Germany who were interviewed together with more than forty professionals working with PPC. Quantitative questionnaires as well as qualitative interviews have been applied. The present study focuses on trends over time associated with participation in the Positive Peer Culture intervention. The results show that an increase in self-worth and a decrease in behavioural problems was associated with PPC participation. PPC participation was also associated with young people reporting feeling valuable and ready to help others. There was a reduction in violence and fighting over time. Young people reported being able to express their feelings more easily. This applied to both negative and positive feelings. Communication skills improved. Acceptance of PPC improved over time. Together with the above improvements self-efficacy showed increases over time. The strong influence of peers should be positively valued. Usually most educational interventions with youth with behavioural problems aim to lead young people in trouble to accept help from others. In contrast PPC leads young people to be helpful to other youth. The experience of being helpful for peers has sustainable consequences for self-efficacy and positive development. PPC is an approach that uses strengths to develop competencies for helping. Consequences for youth welfare services focusing on the development of assets and resources in adolescents' lives will be discussed.

Keywords: positive peer culture, young people, communication skills, behavioural problems

Analyses of perceptual-cognitive skill for optimal performance in sport: Current trends

Chair(s): MACMAHON, C. (Victoria University)

Discussant(s): RAAB, M. (German Sport University)

Sport provides an ideal domain for understanding human performance under complex demands. Similarly, psychological approaches and analyses of sport have granted insights into training and performance that have led to significant advancements. This symposium will illustrate the use of psychological approaches in sport research, tackling problems from talent selection and determinants of success, to performance factors, and influences in the decision making process. The presenters will show a variety of statistical and laboratory-based approaches for understanding expertise in sport, and the perceptual-cognitive components involved. With presenters that use differing approaches to understanding perceptual-motor performance, discussion will centre on the most current questions in expertise research, and future trends.

Using information technology for talent identification and strategy optimisation in cycling omnium races

ZELEZNIKOW, J. (Victoria University)

To use Information Technology to support talent identification of potential cyclists to compete in the newly introduced, to the 2012 Summer Olympic Games, cycling event the Omnium. We also wish to develop strategies for cyclists to optimize their performance (in terms of obtaining points) in both the men's and women's omnium. On December 17, 2009, the Union Cycliste International recommended to the International Olympic Committee a new track programme event for the Summer Olympic Games in London 2012. Recommendations are for it to consist of: flying lap (250-metre time trial); points race (men: 30 km, women: 20 km); individual pursuit (men: 4

km, women: 3 km); scratch race (men: 15 km, women: 10 km); Kilometre time trial (men), 500-metre time trial (women); elimination race (24 starters). We are using data mining techniques to analyse past performances in both individual and omnium events (admittedly previous omniums have consisted of five events over one day rather than the proposed six events over two days) to choose suitable candidates to compete in the Olympics. Probabilistic techniques are being used to optimize the performance (in terms of points) of cyclists in both the men's and women's omnium events. Comparisons are made to the choice of participants and their performance in the men's decathlon and the women's heptathlon in track and field events. The results, to be discussed at the conference, measure how various statistical and artificial intelligence techniques can help in talent identification of medal winning cyclists and improve their performance in omnium events. This work will draw conclusions on how to identify talent and optimize performance in cycling omnium events.

Keywords: *information technology, talent, strategy optimisation, cycling, Olympic Games*

Seeding: A source of the home advantage in World Cup soccer?

STRAUSS, B. (University of Muenster)

The main purpose of the present study was to examine whether host nations receive an advantage in seeding (thereby competing against weaker teams) in the first rounds of the final competition of the *Fédération Internationale de Football Association* (FIFA) World Cup. A popular belief is that one of the economic factors to which the FIFA Organizing Committee is particularly sensitive is the success of the host nation in the first rounds. As a consequence, it is widely held that home teams are placed in a subgrouping with teams that have a relatively lower international ranking or strength among the qualifiers. A secondary purpose was to examine the extent of the home advantage in all games in the FIFA World Cup. A tertiary purpose was to examine the extent of host nation success in all games played between 1930 and 2006. Performance of the home teams was the result in each game

from 1930 to 2006 with a win, tie, and loss coded as 2, 1, and 0 points, respectively. Seeding lists were obtained from the www.fifa.com website. The operational definition of the strength of each team was determined from the World Football ELO Ratings System (www.eloratings.net). Host nations have been competitors in a total of 103 games. Results showed that in comparison to visiting teams, host nations have a significantly superior ($p < .05$) ELO ranking in the earliest phase of the FIFA World Cup tournaments. The advantage resulting from seeding disappeared ($p > .05$) in subsequent phases of the tournament. The results also showed that host nations have substantial success, winning 66% of all games if tie competitions are included and 79% if they are not. Our results showed that there is a strong home advantage in FIFA World Cup Soccer and that the seeding protocol used by FIFA contributes to that advantage.

Keywords: *Fédération Internationale de Football Association (FIFA) World Cup, economic factors, host nation, advantage*

Decision making in tennis: Capturing the impact of situational probabilities on predicting an opponent's intent

LOFFING, F. (University of Kassel, Institute of Sports and Sports Science)

The high ball speeds in racket sports and the latency of an athlete's movement initiation in answer to an opponent's action demand an athlete's effective information-processing. For example, to be at the right place at the right time during a rally in tennis a player has to predict his opponent's intentions based on early pre-shot information. Previous research in tennis showed experts' superiority over novices in tasks that required the participants to anticipate shot direction or shot type without ball flight information available after racket-ball contact. These findings were predominantly interpreted in terms of experts' more distinct capability to use advanced (visual) cues for action outcome anticipation. However, besides correctly interpreting an opponent's kinematics, players also need to include the opponent's as well as their own position on the court in their decision making

(Williams, 2009). Depending on these components the situational probabilities for future events (e.g., will the opposing player hit the ball to my left or right?) may alter significantly from one constellation to another. Although considered crucial in ball sports the impact of situational probabilities on decision-making has scarcely been examined so far (cf. Abernethy, Gill, Parks, & Packer, 2001, for a study in squash). We present a novel methodological approach to tackle this issue. By using point-light animations of players performing forehand ground strokes (e.g., Abernethy et al., 2001) we investigate the influence of situational probabilities on shot direction anticipation in tennis. We designed video simulations where the hitting player's position as well as the observer's viewing perspective (from behind the baseline in the opposite half of the performing player) were systematically manipulated; however, without altering any of the hitting players' movement kinematics. In two laboratory-based experiments currently carried out on tennis players of varying expertise levels, participants are presented with these animations on a monitor (each clip is occluded at the moment the racket makes contact with the ball) and are asked to predict shot direction (left vs. right from the observer's perspective). The exact experimental design and (preliminary) results will be presented at the conference.

Keywords: decision making, information processing, ball sports, tennis, situational probabilities

Intuitive decision making of expert players in sports

RAAB, M. (German Sport University)

Intuition is often considered as an effective manner of decision making in sports. In this study we investigated if a preference for intuition over deliberation results in faster and better lab-based choices in team handball attack situations. We assume that intuitive choices—due to their affective nature—are faster when multiple options are to be considered and are effective if expertise can lead such intuitive choices. 54 male and female handball players of different expertise levels were tested in a lab-experiment,

showing video-based scenarios in a team handball attack situation. An option-generation paradigm was used in which participants were requested to intuitively name an option for the playmaker in an ill-defined situation when the video stopped in a freeze frame. Decision-time was measured in milliseconds, and decision quality was evaluated through expert ratings. After the first intuitive option, they were asked to generate other appropriate options, and finally name the best option from all options generated. A preference for intuitive and deliberative decision making was assessed through the PID-Questionnaire. Results showed that athletes classified with a preference for intuitive decisions made faster and better decisions than athletes classified as deliberative decision makers. Importantly, expert players were more intuitive than near-expert and non-expert players. Results support a Take-The-First heuristic, defining how options are searched for, how option generation is stopped, and how an option is chosen. We conclude that expert players learn to use simple heuristics such as Take-The-First by relying on their intuition, and therefore produce faster and better decisions. The preference of intuitive and deliberative decision making seems to be an important moderator in sports, and it seems to be valid to develop implications for the testing and training of intuitive decision making in this area.

Keywords: decision making, sport, intuitive choices, expert players, team handball attack situation

Applied implications of Mexican ethnopsychology

Chair(s): REYES LAGUNES, I. (National autonomous university of Mexico)

Discussant(s): SALAS-MENOTTI, I. (Santo Tomas University)

Since the time of the Spanish conquest, in Mexico there exist several documents in which we can find descriptions of the way Mexicans behave, like those of monks and some chronicles. But it is not until the end of last century that Ezequiel Chavez made serious attempts to describe, recognize and understand the way Mexicans are and behave. The interest in this task has been of the concern, among others, of philosophers, sociologists, historians, anthropologists, psychoanalysts, psychologists and writers. As it would be too extensive trying to make an exhaustive review of the various approaches just mentioned, we have chosen only three of them: the philosophical, ethnopsychological and the psychodynamic as it can be considered among the most relevant for the measurement of personality in Mexico. The pioneers of this concern to understand Mexican's behavior were philosophers and we can find two fundamental tendencies. The first one represented, among others, by Alfonso Reyes, Jose Vasconcelos, Alfonso and Antonio Caso, which perspective is based on the idea that all philosophy is determined by the peculiar circumstances in which it occurs. The second tendency is represented by Leopoldo Zea who thinks that the main problem is trying to know the peculiarities of the Mexican in a universal context. It becomes very interesting that in both tendencies, the Mexican revolution is mentioned as the start point of the individualization and originality of Mexicans as well as its universality. The philosophical perspectives share the continuous highlighting of the negative aspects of the Mexican: Samuel Ramos refer to the Mexican as the Inventor of Artificial estimations (1951); having a deep feeling of minor value; as Iturriaga declared (1951), Uranga refers to a way of reluctance. Besides, it is not clear to what kind of Mexicans they are talking about (region,

social level, etc.). When Santiago Ramírez presented his book "The Mexican: the psychology of his motivations", interest was aroused to interpret behavior from a new approach: psychodynamic. For him (1959), most of the perturbations of the Mexican nowadays are due to the crash of two cultures: indigenous and Spanish in which the first is subjugated by the second who is the dominant and strong that can be reflected even today in attitudes (malinchismo) as well in verbal expressions. The Mexican Ethnopsychology proposed by Diaz-Guerrero (1972, 1994, and 2003) is directed at identifying both the idiosyncratic or particular characteristics of the Mexican, as well as the general characteristics of human beings. In order to address indigenous character of a culture, he begins by defining socio-culture as a system of interrelated cultural premises that govern the feelings and ideas, and guide the interpersonal relations, stipulate the rolls that have to be carried out and the rules for the interaction of individuals for each role: that is to say, it specifies the where, when, with whom and how to behave. In order to operationalize socio-culture, Diaz-Guerrero (1955; 1963; 1967; 1972; 1977; 1986) extracted the historical-socio-cultural premises (PHSC) from popular sayings, proverbs and other forms of popular communication. The present symposium based on this late approach shows appraisals of different personality variables and looks for applications of the found knowledge to develop a better society.

An etnocultural approach to estimate social desirable responses

DOMINQUEZ ESPNOSA, A (Iberoamerican university)

Socially desirable responding (SDR) is typically defined as the tendency to give positive self-descriptions (Paulhus, 2002). Many researchers have focused on distinguishing SDR from related constructs and developed scales, but not many have explored in detail the eco-cultural validity of such measures, and their suitability in other cultural context, rather than where they were developed. All the important scales (e. g. Marlowe & Crowne, BIDR, Eysenck, Lie Scale from MMPI, Edwards, Jackson, etc.) have been developed in English speaking

countries, and many of them, based on other related measures (e. g. BIDR was based on the SDQ and OCQ, Sackeim & Gur, 1979) assuming as if the items contents were universal. Using qualitative and quantitative techniques, a pool of items was developed in order to assess socially desirable responding both as a response set (a temporary tendency caused by situational demands) and as response style (a trait-like tendency). Based in the idea that Social Desirability has two components, the items were rationally composed to distinguish the dimension of self-deceptive enhancement and impression management. A total of 94 items constituted the preliminary version of the scale. It was applied to a non probabilistic sex-balance sample of 200 Mexican participants, concurrently with the BIDR. The results show significant correlation between the self-deceptive dimension in eight of twelve dimensions that constituted the Mexican scale, but none with the impression management dimension. The final remarks are discussed in terms of the utility of ethno-cultural approaches to develop cultural-sensible scales.

Keywords: eco-cultural validity, response style, social desirability, self-deceptive enhancement, impression management

Applied implications of assertiveness and historical socio-cultural premises in Mexican adolescents

FLORES GALAZ, M.M (University of Yucatan)

The Mexican Ethnopsychology proposed by Diaz-Guerrero (1972, 1994, and 2003) is directed at identifying both the idiosyncratic or particular characteristics of the Mexican, as well as the general characteristics of human beings. In order to address indigenous character of a culture, he begins by defining socio-culture as a system of interrelated cultural premises that govern the feelings and ideas, and guide the interpersonal relations, stipulates the rolls that have to be carried out and the rules for the interaction of individuals for each role. That is to say, it specifies the where, when, with whom and how to behave. In order to operationalize socio-culture, Diaz-Guerrero (1955; 1963; 1967; 1972; 1977; 1986) extracted the historical-socio-cultural premises (PHSC) from popular sayings, proverbs and

other forms of popular communication. Using ethno-psychological methodologies, Flores and Diaz-Loving (2004) have studied assertiveness in Mexico for 20 years. These authors argue that having the capacity to emit an assertive behavior is going to depend on the cultural context in which the individual grew. Furthermore, it is expected that even within a same culture, education, social status, sex, age, personality, etc. will also affect its emission and interpretation. To fully understand the phenomena, the conceptualization and operationalization of assertiveness in Mexico was derived from a series of exploratory studies that included assessing the effects of a family based collectivism that is centered on harmonious interactions (Flores, 2004). The purpose of the present study was to determine the relationship between assertiveness and the degree of attachment to the traditional historic-socio-cultural premises of the Mexican culture in adolescents. 801 students of public secondary and High schools and participated, selected by means of a non-probabilistic sampling method based on clusters by ecosystem, sex and schooling of the State of Yucatan, 406 men and 395 women, with an average age of 15,95 years participated. The Multidimensional de Assertiveness Scale that measures Indirect Assertiveness, non Assertiveness and Assertiveness in everyday situations was administered (EMA) (Flores and Diaz-Loving, 2004) together with the historic-socio-cultural Premises Inventory conformed by nine factors: Obedience Afiliativa, Machismo, Virginity, Consent, Fear to the Authority, Familiar Quo Status, Respect on love, familiar Honor and Cultural Rigidity (Diaz-Guerrero, 1972; 1993. Results show significant correlations indicating that the greater the assertiveness, the less individuals adhere to traditional premises, that is to say, less attachment to the PHSC. To the need of basic knowledge of culture for interventions directed at organizations, clinical work and communities will be discussed.

Keywords: ethnopsychology, Mexican, culture, socio-culture, communication

Power and acculturation in Mexico

RIVERA ARAGON, S. (National Autonomous University of Mexico), VILLANUEVA OROZCO, T. (National Autonomous University of Mexico)

Power is determined by the members of a society, a group, a family, a couple and is constituted by a structural and ideological component. (Schwebel, 1994 en Atwood y Scholtz, 2005). The structural refers to the hierarchical position of each member within a group; the second indicates the position the member should have (Dallos, 1997 en Atwood y Scholtz, 2005). It should be stated that power occurs within cultural boundaries, thus, acculturation, which refers to the process of adapting the culture of origin to another one, needs to be considered when analyzing power. Acculturation can be assessed mainly through attitudinal and behavioral changes (Antsel, 2002; Berry, 1980; Marín and Marín, 1991; Rogler, Cortés and Malgrady, 1991; in Christenson, Zabriskie, Eggett and Freeman, 2006). Given that power refers to the way that we impose a position guided by norms and believes, it is essential to study the socio-cultural guidelines given in the cultural premises of each ecosystem (Diaz Guerrero, 1993, 2007). In fact, it is expected that traditional people in Mexico use strategies congruent with a culture that stresses love and indirect speech; while, as individuals in these family oriented collectivistic culture become less attached to traditional premises, they should use power strategies in line with the new culture they are identifying with. With the intent of observing the effects of acculturation processes moving subjects from a family based collectivistic orientation toward an instrumental individualistic position on the preferred power strategies, 601 Mexicans, 302 females and 299 males with ages between 18 and 79 ($M=40.39$, $SD=12.51$) with an average of 15.8 years in a couple relationship responded an acculturation scale (ARSMA-II, Cuellar, Arnold & Maldonado, 1995) and a power strategies scale (Rivera & Díaz Loving, 2002). Results show a congruent correlation pattern between power strategies and acculturation. With respect to Mexican traditionalism, people with this direction use affective-positive, fairness-reciprocity, direct rational and of affect-request power strategies. On the other hand, people with an Anglo-American orientation, use direct unilateral

behaviors such as imposition-manipulation, disqualify, negative affection, coercion, blackmail and dominion. For the marginalization subscale, a single positive significant relation was found with the negative strategies (imposition-manipulation, disqualifying, negative affection and blackmail). Findings fit the hypothesis that Mexicans attached to traditional family collectivistic premises tend to make use of power strategies that emphasize maintaining affable relationships. As stated by Diaz Guerrero (2007), the Mexican culture favors self-modification over self-affirmation. Discussion will center on the role of culture on the strategies people use to modify their social environment, and particularly how positive affect strategies are successful in an affiliative obedient culture when requesting something that originally the other does not wish to do and that nevertheless, if these means are culturally appropriate, that others, will subjugate to the request.

Keywords: power, group membership, acculturation, behaviour change, collectivist culture

Mexicans' self concept and self esteem from ethnopsychometric's perspective

REYES LAGUNES, I. (National Autonomous university of Mexico), KUNA-BRONIOWSKA, A. (Poland Academy of Science)

Given its long and varied history, the terms have had a great diversity of definitions generated by different traditions of research, findings, and practical applications. Several studies (e.g. La Rosa & Díaz-Loving, 1991; Reyes-Lagunes, Ahumada & Díaz-Guerrero, 1966, Valdez & Reyes-Lagunes, 1993, 1996) have proven translation and adaptation of foreign originated tests don't assess validly these concepts, consequently the aim of this paper is to present two goals: The development of two indigenous psychometric tests for the Mexican culture and differences found in different regions in our country. Construct's definitions are also proposed. Based on the theoretical definitions of the constructs, the Natural Semantic Network Method (Reyes-Lagunes, 1993) was used to obtained a representative sample of

characteristics which Mexicans attribute to themselves and the overall appraisal of their worth. 300 individuals with ages ranging from 18 to 25 years old from three different regions, north, central and south of Mexico responded to the scales. Both scales are psychometrically valid with high internal reliability. Self concept scores are generally higher than self esteem. Significant differences by region and sex were found in some of the factors. There is an extreme need to develop cultural relevant test to be able to develop efficient and relevant programs.

Keywords: *psychometric tests, Mexican, self concept, self-esteem, ethnopsychology*

Implications of Mexican historic-socio-cultural premises and copying styles

DIAZ LOVING, R. (National Autonomous University of Mexico)

It is believed that all cultures have developed or institutionalized means to address and satisfy human needs. The resulting pattern of norms values and beliefs resulting from cultural evolution can be used to characterize a given culture or a group of cultures and has direct consequences on the behavior of its members (Diaz Guerrero, 2007). To specify the set of behavioral rules, Diaz Guerrero forged the socio-cultural premises within the framework of Mexican Ethnopsychology. The premises are simple or complex statements that provide bases for the specific logic with groups. These premises are learned from significant figures of authority within a cultural context and are reinforced by all the adults of a socio-cultural group (Diaz Guerrero, 1982, 2007). From the constant dialectic between premises and psychobiological individual needs, copying strategies are developed to face everyday experience. These styles are engulfed in the Philosophy of Life which are two distinct strategies directed at changing oneself or the environment when faced with a problem. On the one hand, traditional Mexicans are impelled to modify themselves in order to solve problems, while more individualistic members of this culture tend to modify their environment and/or to others to solve their problems. Originally this dichotomy was denominated the passive active

syndromes (Diaz-Guerrero, 2007). With the purpose of knowing the relation between the PHSCs and the Philosophy of Life, the original (Diaz Guerrero, 1972, 1993) 123 premises and the Philosophy of Life scale (Diaz Guerrero, 1972, 1993) were applied to 1706 voluntary participants. Given the importance of education on the attachment to cultural norms, participants were selected to represent a wide range, 248 were college students, 630 high school students, 586 secondary students and 242 elementary school students. The age range of the participants went from 10 to 25 years. All belonged to state schools within Mexico City. Results generally show a consistent pattern between premises factors and life philosophy. Specifically, machismo and the acceptance of independence are positively related to internal-active control and autonomy and in negative form with love and caution. For affiliative obedience, results show a positive relation to interdependence, and a negative one with active internal control and boldness. On the other hand, the family honor factor is correlated in negative form with the love-power dichotomy and positively with autonomy-interdependence. In general, data shows that people with a self-modifying style adopt traditional premises like affiliative obedience. The findings are discussed based on the need of knowledge of the cultural effects on the development of interventions in health and community psychology.

Keywords: *cultural evolution, group membership, Mexican ethnopsychology, behavioral rules, community psychology*

Applied psychological research in the service of evidence-based social policy in Hong Kong and Beijing

Chair(s): CHAN, C. (Department of Applied Social Sciences Hong Kong Polytechnic University)

Discussant(s): CHAN, C. (Department of Applied Social Sciences Hong Kong Polytechnic University)

This symposium aims to demonstrate how applied psychological research programs are being translated into quality practice and contribute to city-wide social policy and services deliberations. Since re-united with the Chinese Mainland in 1997, the Hong Kong SAR Government has, perhaps inadvertently, made great strides toward evidence-based social policy through the setting up of a number of designated funds to augment policy reforms in health, welfare and education. This has attracted cross-sector researchers and practitioners to compete for funding on large-scale social experimentations. This symposium will include two theoretical and empirical papers focus on the social policy agenda surrounding the setting up of the HK\$300 million Child Development Fund pioneer projects which aims at deriving longer-term policy on inter-generational poverty alleviation among child and youth from disadvantaged families. The Fund has planned to cover a total of 13,600 families. In addition, two empirical papers from Beijing and Shanghai conducted in eight migrant worker children schools through a collaborative effort of nine universities will be used to contrast the HK model. Key learning objectives include: 1. A review of how transactional (Sameroff, 2009) and relational model of development theories (Lerner, 2002), in the tradition of community and clinical psychology, have influenced the debate and choice of conceptual models of poverty alleviation policy and ultimately the design of city-wide programs; 2. A discussion of how applied psychological researchers co-create and evaluate the program with multiple stakeholders including the government, the

corporate community, the faith-based sector and low-income families; 3. Generating empirically-supported practice from process and outcome data gathered from the program. This will be illustrated by a number of scientific papers on adolescent mental health, after-school activities, mentor relationship quality and asset-building mechanism including matched saving behaviors.

Community psychology and inter-generational poverty alleviation – Towards asset building communities in Hong Kong & Beijing

CHAN, C. (Department of Applied Social Sciences Hong Kong Polytechnic University)

This paper aims to provide an overview of how a number of asset-building programs come into operation in Hong Kong and Beijing since 2007 initiated and led by a group of community and clinical psychologists with backgrounds in developmental science, counseling, public health and social and cultural psychology. In consort with community advocates, social workers and policy makers, community coalitions are formed receiving official recognition of their contributions to launching pioneer projects in both Hong Kong and Beijing. Small scale publically funded pilot projects have become the main platforms for the deliberation of conceptual models and outcomes indicators for large scale, city-wide programs. Public consultations, formation of community coalitions and alliance have also been instrumental in the tri-partite effort of government-corporate-community in the program implementation phase. Core methods from applied developmental sciences are deployed for generating empirically-supported practice in these programs. Champion and supported by the HKSAR government, the Child Development Fund Pioneer Projects has planned to double its uptake as well coverage in more needy districts. Program integrity is being systematically monitored with supported as the projects move into its final stage of implementation. Data demonstrated a higher level of outcome attainment in relation to comparable programs in other parts of the world. Applied psychological research has made its presence in many existing policy-

driven social experimentations. There are signs that officials in the Chinese Mainland are increasing showing interest with support first to small-scale pilots projects especially initiated by university academics and researchers in collaboration with community stakeholders. The Hong Kong Child Development Fund may, in time, serves as a prototype for a stage model of applied psychological research in the service of evidence-based social policy.

Keywords: *asset-building programs, community psychology, clinical psychologists, Child Development Fund Pioneer Projects, applied psychology*

Chinese migrant children's career efficacy and mental health: The roles of mentor relationship quality and self efficacy

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The current study aimed to examine whether immigrant children's relationship quality with their mentors could make unique contributions in predicting their career efficacy and mental health, above and beyond the prediction from their relationship quality with parents. In addition, based on social cognitive theory (Bandura, 1986), it was also proposed that migrant children's self efficacy beliefs may mediate the positive effects of mentor relationship quality on career efficacy and mental health. A survey study was conducted among Chinese migrant children ($N = 114$) who joined a mentorship program at Beijing, Chinese Mainland. Participants were asked to complete the questionnaires based on their experience in the mentorship program. One hundred and fourteen immigrant children (48 males and 64 females) provided valid data for the study. Their average age was 15.00 ($SD = 1.72$). Two participants did not indicate their gender and three participants did not indicate their age. Mentor relationship quality ($\alpha = .92$), relationship quality with parents ($\alpha = .85$) self efficacy ($\alpha = .86$), career efficacy ($\alpha = .85$) and mental health ($\alpha = .79$) were measured by items established in previous studies. The results of regression analysis showed that after controlling the effects of parent relationship quality, mentor relationship quality made

unique contribution in predicting immigrant children's career efficacy ($\beta = .31, t = 3.60, p < .001$) and mental health ($\beta = .28, t = 3.15, p < .01$). In addition, path analysis revealed that the positive effects of mentor relationship quality on career efficacy and mental health were fully mediated by children's self efficacy beliefs ($\chi^2 = 6.26, df = 5, CFI = .99, RMSEA = .07$). The quality of mentor-mentee relationship served as significant predictor for immigrant children' career efficacy and mental health; moreover, the relations were fully mediated by self efficacy beliefs, which suggested a social cognitive mechanism for the positive effects of mentorship program.

Keywords: *immigrants, mentors, career efficacy, mental health, social cognitive theory*

A person-oriented approach to unravel the complex relations between after-school activities, resilience and social support among mobile children in Beijing and Shanghai

LAI, S. (Department of Applied Social Sciences
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An estimated 10% population in Chinese Mainland is rural-to-urban migrants and 12% of this population is children of school age. After-school activities can be important resources to development in mobile child as they generally showed a lower resilience and social support than their local counterpart. Studying the relationship of after-school activities with resilience and social support can provide useful information to the design of supportive and intervention programs to mobile children (they are known as mobile children because their migration in the absence of a residency permit in the city (hukous) may not be permanent). A person-oriented analytical strategy was applied to study the time children spent on after-school activities. Clusters of children with different profiles of after-school activity participation were identified by the SLEIPNER program (Bergman, Magnusson, & El-Khoury, 2003). Levels of resilience and social support were compared between mobile and local children with different profile of after-school activity participation. Regression analyses were used to identify useful predictors of resilience and social support levels. The 1070 students

were grouped into 6 clusters: Inactive (487, 45.51%), Overloaded (169, 15.79%), TV/Game Indulged (158, 14.77%), Responsible (111, 10.37%), Outgoing (84, 7.85%), and Independent (61, 5.70%). Membership of after-school activity profile associated with background of children ($\chi^2 = 44.45, p < 0.001$). Family social support in TV/Game Indulged students were significantly lower than Outgoing students ($Z = -3.06, p = 0.002$). Resilience in TV/Game Indulged students were significantly lower than Passive, Responsible and Self-reliance students ($Zs < -2.99, ps < 0.003$). Findings from regression analyses confirmed the adjusted negative effect of indulgence in TV/Game on resilience ($t = -4.41, p < 0.001$) and family social support ($t = -3.22, p = 0.001$). An alternative approach to study after-school activities in children is to treat participation in different activities as a whole and relating them to the children's background and important developmental outcomes. Mobile children in private schools were lower in resilience and social support than their local counterparts in public schools and indulgence in TV/Game would produce an added negative effect.

Keywords: after-school activities, resilience, social support, migrants, children

Saving behavior among adolescents in a matched saving plan in Hong Kong: The role of institutional factor on saving behavior

CHAN, K. (Department of Applied Social Sciences Hong Kong Polytechnic University)

Saving behavior in adolescents, especially among those engaged in matched saving plans, is influenced by interpersonal and institutional factors (Sherraden, 1991). Current evidence on adolescents saving behavior suggested while girls and older adolescents tend to save more and save more regularly, institutional factors such as the availability of an individual account or mechanism for direct deposit were also reliable predictor of adolescent saving behavior. The present study explores the effect of interpersonal factors (i.e. age, gender), and institutional factors on saving behaviors among adolescents. Saving record data from a territory-wide child saving

program in Hong Kong ($n = 750$), along with information on age and gender of participants, and institutional factor towards saving (individual account for each participants or pooled account for all participants under an operating organization) were analyzed in an observational design study. Continuous saving behavior is defined as a dichotomous categorical variable on whether a program participant has made consistent and consecutive deposits over a three-month span in year 2009. Effect of gender, age, and saving account type on the dichotomous saving behavior was modeled with a logistic regression model. More families with girl maintained continuous saving behavior within a 3-month span than their counterparts with boys, and age of adolescent in the saving program household revealed a mild and positive association with continuous saving behavior; yet neither of the effect from gender (Odds ratio = 1.22, $p = 0.464$) nor age (Odds ratio = 1.03, $p = 0.714$) factors reach statistical significance. Controlling for the effect of age and gender, saving account type was significantly associated with consistent saving behavior (Odds ratio = 3.45, $p < 0.01$). Account type was a significant predictor of consistent saving behavior, lending support to the institutional saving theory (Sherraden, Schreiner, & Beverly, 2003) that suggests individuals are more likely to save in an environment where the saving institution provides access, information, incentives, and facilitation to their savings. Although the observed effects did not reach statistical significance, the present findings also echoed similar reports where older adolescents and girls are more likely to save and save more.

Keywords: adolescents, saving behaviour, gender differences, interpersonal factors, incentives

Applied psychology in Latin American Countries: Theoretical and methodological issues

Chair(s): MALUF, M. R (PUCSP)

Discussant(s): KOLLER, S. (UFRGS)

Psychology research work in Latin American countries is currently carried out within a huge framework of diversity. A deep interest in Applied Psychology studies have stemmed from the urgent social needs found in these countries. This symposium will focus on a variety of topics that address such studies. 1. While developing in Brazil, social psychology has undergone some remarkable changes in the last forty years, and currently encompasses its own features as a theoretical, research, and teaching approach. 2. Research programs developed in Argentina have approached children's development issues with a particular focus on socially vulnerable children. The results presented in this symposium refer to precursor processes of pro-social behavior and the impact caused by environmental stress on children living in poverty. 3. Recent advanced developments in reading cognitive psychology have presented evidences that reading/writing learning is based on two axes, decoding and comprehension. Some training studies will be exposed along this theoretical/methodological approach, thereby providing evidence on how writing learning can be ensured to the vast majority of unprivileged children who attend schools in Latin America. 4. Theoretical and methodological proposals by some cross-cultural psychologists will then be presented as well as the development of a Mexican ethnopsychology. Some evidences will be presented to show that indigenous approaches to psychological investigation do provide an important corrective tool to untested assumptions about the universal applicability of currently popular perspectives. 5. Eventually, a professional psychologist will foster some discussion about the proposals presented in this symposium.

Transformations in social psychology in Brazil since 1968

SCHEIBE, K. E (Wesleyan University)

The aim of this study was to describe the changes that have taken place in theories, concepts and research practices in social psychology in Brazil in the past 41 years. The author gave the first social psychology course at the Federal University of Brasilia in 1968. In 1972, he returned to the Pontifícia Universidade Católica de São Paulo (PUCSP) supported by a Fulbright Fellowship, where he helped to found the first post-graduate program in social psychology at that university. He returned frequently to the PUCSP after the 1972-73 year, and taught short programs as well at other universities in Brasil, including the University of São Paulo the Federal University of Minas Gerais, Pontificia Universidade Católica de Rio de Janeiro, the Universidade de Campinas, and the University of São Paulo at Riberão Preto (USP). In 1984 he returned to PUCSP supported by another Fulbright award, to teach courses in the graduate program in social psychology. Since that time, he has been invited to return to São Paulo on many occasions to make presentations, advise students, or to serve on doctoral committees for graduate students in social psychology. These many visits have allowed opportunities to observe the development of social psychology in Brazil over the past 41 years. From extremely small beginnings in the late 1960's, social psychology in Brazil has developed into a conspicuous, powerful, and highly regarded subfield of psychological theory and research. In 1980, a national organization was founded in order to support the communications, research, development and support for the subdiscipline (ABRAPSO—Associação Brasileira de Psicologia Social). The journal *Psicologia e Sociedade* has published continuously since that time. ABRAPSO holds popular regional and national congresses. From the late 1960's, when Educational Psychology, Clinical Psychology, and Skinnerian Psychology dominated psychology as a field of study and research in Brazil, Social Psychology has established itself as a major subfield of psychological research and teaching. In particular, the study of transformations in

social identity has become firmly established as a focus of theory and research in Brazil.

Keywords: *social psychology, identity, theory, transformations, Brazil*

Precursor processes of prosocial behaviour in children and strengthening of psychological resources in children at extreme poverty

RICHAUD DE MINZI, M. C. (CIIPME-CONICET)

In this work I am going to present two important issues of child development that we work in CIIPME-CONICET, Argentina. In the first: "Precursor processes of prosocial behaviour", we establish that the understanding of others' emotions, the regulation of emotional expressiveness, and the others' emotions (the ability to generate or modulate the others' emotions by comforting and encouraging them) are keys for the establishment of bonds and for the development of social competences. Our aim is to test a model, including empathy as a multidimensional construct, that explains the understanding of others' subjective experience and the sharing sense, and depends of dispositional and social aspects. Also, empathy would explain prosocial moral reasoning processes, positive emotions and would facilitate prosocial behaviour and inhibit aggressiveness. We will present partial results of this project. Some conclusions of relationships between dispositional and social processes and prosocial behaviour are key processes in the understanding of children at risk behaviour. Several environmental factors may affect the processes of brain-development, although one of the most relevant is the impact caused by environmental stress. Stress causes an increase of the cortisol level in the blood. Excessively high and constant levels of cortisol in the brain prevent neuronal growth and synapses formation in the child. Given that situation, the risk of cognitive and socio-emotional deficit is round the corner. Prior research has shown that the presence of a sensitive caregiver that responds to children's needs can prevent the increase of cortisol. Children who grow up in families with social vulnerability present with high levels of cortisol. If children live in a chaotic and

threatening world, the brain of these children focuses on survival strategies and does not develop cognitive and social abilities. Results demonstrate that it is better to develop intervention and prevention programs because a great part of their action is experiential. This demonstrates that the observed phenomena in poor children are the result of adverse environments (Farah, et al., 2006). We will present results that indicate that a continuum, intense and controlled work can obtain great progress in psychological resources in children at environmental risk.

Keywords: *child development, prosocial behaviour, empathy, moral reasoning, social vulnerability*

Teaching reading & writing at school and children endangered by poverty

MALUF, M. R. (PUCSP)

Teaching reading and writing at school is often a politically biased issue. The conclusions reached by researchers are not usually shared by teacher trainers or professionals in charge of government programs in many countries. There appears to be evidence that the existing gap between researchers and policy makers also take place in Brazil. In this country, where children are taught how to read and write in the Portuguese language, children from families endangered by poverty are the most affected victims of such a gap. Recent research has shown that there is a relationship between cognitive variables and the alphabetic system learning, whereby it is possible to investigate what is specific in reading and writing activities. This presentation embraces reading cognitive psychology hypotheses, which investigate the mental mechanisms implied in reading and writing learning. The aim is to explore the implications of this theoretical/methodological approach for educational practices by presenting the results of experimental training researches. These researches provided evidence that children can learn better at school and can also overcome learning handicaps provided that teaching methods include metalinguistic skills training. The results show that this approach may be particularly useful among unprivileged children who have no stimulating reading and writing

experiences in their everyday life. It is thereby concluded that the question is not knowing whether or not the alphabetic code should be taught, but rather how it should be taught.

Keywords: *teaching, reading, writing, poverty, learning handicaps*

Applying psychological research: Insights from ethnopsychology

DIAZ-LOVING, R. (National Autonomous University of Mexico)

Indigenous approaches to psychological investigation provide an important corrective to untested assumptions about the universal applicability of currently popular perspectives. In fact, attempts of curving rampant intuitive interpretations of non equivalent samples and variables across alleged cultures by suggesting specific methodological strategies (Poortinga & Malpass (1986), have generally fallen on deaf ears. In response, data from a truly ecological or cultural perspective requires the direct inclusion or measurement of cultural and structural variables as well as the functional relationship of psychological variables within a cultural system, before any attempt of cross-cultural comparisons are made. In consideration of the sound methodological and theoretical proposals made by some cross-cultural psychologists, but ignored by most, we will review the development of a Mexican ethnopsychology (e.g. Diaz-Guerrero, 1994; 2002), which is directed from a universal conception of psychology, but also stresses the importance of measuring psychological manifestations of culture through norms, beliefs, values and education, the behavioral manifestations of psychological constructs common to the participants in different sub-cultures, and the interrelationship between cultural and psychological variables. The diagnosis, intervention and evaluation of impact of any applied research or program must consider these cultural variations in order to be both ethical and effective. This will be discussed in light of current trends in psychological practice in Mexico.

Keywords: *Indigenous, cross-cultural comparisons, ethnopsychology, beliefs, values*

Aspects of counselling in Europe

Chair(s): DI FABIO, A. (University of Florence)

Discussant(s): GUICHARD, J. (Institut National d'Etudes du Travail et d'Orientation Professionnelle)

This symposium aims to contribute to clarifying the current situation of counseling in Europe from both theoretical and practical perspectives. The cases of four nations (Italy, France, Portugal, Switzerland) are briefly described. This comparison reveals a common denominator: counseling in these countries seems to be primarily career counseling. A fifth report regards the effects of counseling in general, but also with regard to career counseling. Departing from this topic, the following questions will be dealt with: (1) If and in what other fields does counseling intervention exist? (2) If so, how can we account for the gap between career counseling and other forms of counseling? (3) Would reducing it be beneficial? (4) If yes, then how? Through the development of a common training program (Masters)? And what type (Masters)? And based on what common knowledge? And does a common counseling culture exist in Europe? The learning objectives of this symposium are to: (1) Develop an awareness of the complexity of the counseling situation in Europe; (2) Introduce the different European situations which will allow similarities and specificities to emerge; (3) Construct a shared framework which also considers the needs connected with the training of counselors; (4) Stimulate, in Europe as well, scientific research on counseling, empowering cross-cultural research, to nurture and promote the quality of professional intervention.

Counseling in Italy: Complexity, points of strength, areas of improvement

DI FABIO, A. (University of Florence)

The presentation deals with the reality of counseling in Italy, from its success to its current configuration, to the complexity of the problematic issues present in counseling in this country. If on one hand, a sudden spread of

the linguistic label has occurred during the last decade, whose use is not often adequately supported by scientifically established theoretical bases; on the other hand, we have seen various significant events for the construction of a scientific culture in counseling in Italy, for example the birth of the first Italian scientific journal on this topic engaged in the safeguarding of the theoretical principles that inspire counseling in the scientific literature. The presentation highlights: the problems tied to the plurality of actions and interventions that counseling implies (Guichard, in press; Guichard & Huteau, 2001) and the need to safeguard the psychological foundation and the non-directivity principles in the counselor/client relationship; a view of the different fields of application, with reference to a taxonomy divided into informative counseling, crisis counseling, problem solving and decision-making counseling (Di Fabio, 1999; Savickas, 2004). The presentation will describe a study on the characteristics of training courses provided in Italy by counseling schools present in the lists of three principal Italian professional associations. Problematic aspects tied to the regulation of the formative structure in Italy concerning this professionalism emerged. The importance of promoting, in Italy, a scientific culture of counseling on one hand and scientific research on counseling on the other will be discussed, as well as empowering cross-cultural research to feed and promote the quality of professional interventions (Di Fabio & Bernaud, 2008; Gysbers, Heppner, & Johnson, 2003; Young, Valach, & Domene, 2005).

Keywords: *counselling, crisis counseling, decision making, cross-cultural, Italy*

Career counseling in France: An evolving heterogeneous field

COHEN-SCALI, V. (University of Caen)

This communication aims at providing an overview of the current developments in terms of career counseling practices and professions in France. The situation of the counseling field can be described as heterogeneous and paradoxical for two reasons that will be explained. The first reason is linked to the fact

that the living conditions in the past twenty years have led to an increased social need for career counseling. As a result, there has been an increased number of career counselors in France who do not feel they belong to the same professional family. The second one concerns the weaknesses of the career counseling training issues. Only a few counseling certifications in France exist. Only one academic path awards the French State Master's Degree of School and Career Counseling. Some professional counselors have a Master's degree in human and social sciences, but some have no specific degree. The presentation will focus on the strengths, weaknesses, opportunities and challenges that the career counselor and researchers will have to deal with in France in the future. Among these difficulties, the current concerns of cost restrictions in public services which will cause important changes in the practice of counselors and a major reorganization of the field of counseling as a commercial service will be emphasized.

Keywords: *career counselling, training, social sciences, counselling, France*

Career counseling in Europe or the contextualization of counseling: A case study from Portugal

DUARTE, M. E. (University of Lisbon)

This presentation deals with the necessity of new conceptualizations in the field of career counseling, in order to achieve an articulated framework integrating the traditional psychological and social determinants as well as new conceptualizations: idiographic profiles, the mapping of socio-cultural contexts, and the interaction with the real world. A new rationale in the career counseling domain is presented alongside the identification of cues, both pertaining and leading to the prediction of personal well-being. These aspects are illustrated using a case study. This Portuguese presentation intends to highlight the importance of contextualization. A case study is presented following the outline of life-design career counseling, and illustrates this new way to view career counseling. The results are presented, as well as case notes filed after each counseling session. Career counseling

must not only serve the purpose of describing or explaining behaviors, but it should address the issues of the individual's entire life contexts. However, globalization determines shifts, frequently not precisely predictable. The path seems to be the implementation of a comprehensive model built upon a comprehensive construct, in which psychological and contextual differences can be taken into account.

Keywords: *career counselling, life-design career counseling, counselling, well-being, socio-cultural contexts*

Counseling in context and evolution of core competencies: The case of Switzerland

DAUWALDER, J. P. (University of Lausanne)

There is a co-evolution between societal needs and requested counseling skills or counselor competencies. Recent trends in Europe focus upon the definition of core competencies. However, continuous adaptation to changing contexts suggests polyvalent use of a growing diversity of methods and techniques. We will try to show that experienced counselors, as compared to younger colleagues, develop contextualized uses of their skills. A set of 13 core competencies has recently been defined and implemented as a common quality standard for career counseling in Switzerland. The differentiated use of the counselor's skills has been documented through a survey of experienced ($N = 53$) and less experienced ($N = 49$) counselors in different settings. Whereas experienced counselors generally report higher levels of competencies, a significant drop in research-related competencies has been observed, as compared to younger colleagues. Moreover, in function of the setting where counseling takes place, different profiles of specialization with 'local' particularities emerge. These results will be discussed in light of the new trends in life-long and life-wide counseling, such as 'life-designing' (Savickas et al., 2009). Not only the research-controlled (and thus sustainable) use of core competencies has to be promoted, but additionally the 'meta-conceptualization' of indications and control criteria for

differentiated use of complementary techniques and methods has to be developed.

Keywords: *counselling skills, counselor competencies, career counselling, life-designing, Switzerland*

Perceived effects of career counseling and client satisfaction: An empirical study

DI FABIO, A. (University of Florence)

The study of the efficacy of intervention constitutes an important subject area in the field of career counseling (Di Fabio & Bernaud, 2008; Guichard & Huteau, 2001; Heppner & Heppner, 2003; Whiston, Sexton, & Lasoff, 1998) and in the framework of the new paradigm, life designing career counseling (Savickas et al., in press), which focuses on individual subjectivity in a life-long, holistic, contextual and preventive perspective. The aim of the present study was to analyze the role of the perceived behavior of the career counselor and the counselor's characteristics and the modality of intervention in relation to client satisfaction and the perceived effects of the career counseling intervention. The questionnaire was administered to a sample of 1,287 university and high school students from Tuscany. Nine hundred sixty-six subjects were excluded because they declared they had never met a career counselor. The sample of the present research consists of 321 participants, consisting of 190 university students (59.30%) and 131 high school students (40.70%). The questionnaire was composed of the following elements: a first part designed to demonstrate the characteristics of the career counselor and the intervention modality; a single item to evaluate client satisfaction; a scale to evaluate perceived effects of the career counseling intervention and a scale to evaluate perceived behavior of the career counselor. The criterion necessary to be included in the sample was to have had a counseling session with a career counselor at least once. Correlations and multiple regressions were conducted. It emerged that client satisfaction can be explained principally by perceived relational behaviors of the career counselor, while the perceived effects of the career counseling intervention (awareness of self, awareness of

environment, psychological mobilization, insertion ability) are better explained by perceived technical behavior. The results provide further consideration (Bernaud, Di Fabio, & Mpouki, 2006) of the efficacy of career counseling intervention in an Italian context, delineating new areas of future research and intervention.

Keywords: *career counselling, life-design career counseling, career counselor, client satisfaction, career counselling*

Assessing development of junior high and high school students' generic skills through participation to School Events Analysing System (SEAS)

Chair(s): SUGIMORI, S. (Tokyo Gakugei University)

Discussant(s): MCGAW, B. (Melbourne University)

Measuring, evaluating, and developing children's generic skills is a core topic of education in the global context. To measure students' generic skills within a context of school events, Tokyo Gakugei University and JTB Business World Tokyo Corp. have invented "SEAS: School Events Analyzing System" The system has already been used by nearly 100 private or national junior high and high schools in Tokyo Metropolitan area, and more than 50 thousand students have answered to the questionnaire. This system aims to measure the development of generic skills through participating to three types of school events: cultural events, sports events, and traveling events. This system assesses the development of students' various generic skills by six dimensions along with their attachment to schools, degree of efforts made to participate to the school events, degree of satisfaction felt by the participation. This system feedback the results to schools on the class, grade, and event basis. This system has also proven to be useful for the assessment of development of students' generic skills through various events and activities inside and outside of schools. The first speaker, Kazuhiro Ueki, explains how the system is utilized by various schools for various purposes including school evaluation, planning for the next school events, and vice versa. The second speaker, Dr. Masami Hayashi presents the Japanese educational system of extracurricular activities. The third speaker, Dr. Shinkichi Sugimori, and the fourth speaker Dr Satoe Fukui present about the psychological findings through various data analysis. As a discussant, Dr. Barry McGaw at Melbourne University, one of the

representative persons of controlling global trends of measuring generic skills gives comments to the reports.

Systems and case reports of “SEAS”

UEKI, K. (JTB Business World Tokyo Corp.), ARIMA, T. (JTB Business World Tokyo Corp.)

Through the development and feedbacks of the results of School Events Analyzing System (SEAS) to, plenty of valuable findings were acquired. This presentation is intended to show the fruitfulness of the system of SEAS, and the way they are utilized by various school settings. Through feedbacks to dozens of schools about the results of SEAS, creative dialogue between researchers and teachers were made. Based on the various case studies, it was found that the results of SEAS reflect important aspects of school events, most of which is being noticed by the teachers, but some of the results reflect implicit group processes of students which cannot be noticed by the teachers. When we feedback these unnoticed implicit group processes of the students, creative dialogue between researchers and teachers are made, which would bring fruitful discoveries. SEAS is found to be very helpful tool to activate school events, to promote teachers' understanding of students, and to measure development of generic skills of students.

Keywords: schools, school events analyzing system, implicit group processes, teachers, generic skills

Pedagogical backgrounds of SEAS

HAYASHI, M. (Tokyo Gakugei University)

SEAS is intended to measure the effects of extracurricular activities in an objective way. Until SEAS was invented, the effects were described by teachers' subjective observation with verbal descriptions. SEAS has made it possible to assess the effects of school events in more objective way, with objective measurement. This report also present the analysis of free responses by the students. Analysis of the extracurricular activities in Japan in reference to documents of the

Japanese Ministry of Sports, Science, and Technologies. Along with these analyses, free description written by students in various events are analyzed using software for data mining of free descriptions. It was found that when the performance and satisfaction of students are high (e.g., high performers), teachers of these schools also find the event fruitful. Thus, the quality of the students' performance and the teachers' evaluation are keenly related with the students and teachers' quality of activities. SEAS is an effective tool to measure various aspects of the effects of school events.

Keywords: School Events Analyzing System, extracurricular activities, school events, satisfaction, performance

Psychological analysis of the effects of school events through SEAS (1)

SUGIMORI, S. (Tokyo Gakugei University)

This presentation is aimed to present recent findings through statistical analysis of the data gathered from the participants of SEAS. Statistical analysis of the data of 50 thousands students and a thousand of teachers, various findings were obtained. It was found that the self rated generic skills are highest among the students participated into traveling events. Those with sports events were found to be least in the sense of the development of generic skills. It was also found that girls tend to report higher sense of development than boys. Also, it was found that cultural events tend to facilitate the sense of attachment to the schools. Students with higher sense of satisfaction with the participation to the events tend to make greater efforts for the participation of events. If the sense of satisfaction is lower compared with the sense of efforts made, they are likely to be led to move with extrinsic motivation. If the subjective development of generic skills is lower compared with the degree of satisfaction, there is a possibility that the activity of the event was focused to sensual entertainments, and it did not facilitate inner mental development. Data analysis of SEAS found it clear that various developmental aspects of generic skills are related with the contents of the school events.

Keywords: *school events analyzing system, statistical analysis, school events, generic skills, satisfaction*

Psychological analysis of the effects of school events through SEAS (2)

FUKUI, S. (Tokyo Gakugei University)

This presentation is aimed to present recent findings through statistical analysis of the data gathered from the participants of SEAS. Statistical analysis of the data of 50 thousands students and a thousand of teachers, various findings were obtained. It was found that the self rated generic skills are highest among the students participated into traveling events. Those with sports events were found to be least in the sense of the development of generic skills. It was also found that girls tend to report higher sense of development than boys. Also, it was found that cultural events tend to facilitate the sense of attachment to the schools. Students with higher sense of satisfaction with the participation to the events tend to make greater efforts for the participation of events. If the sense of satisfaction is lower compared with the sense of efforts made, they are likely to be led to move with extrinsic motivation. If the subjective development of generic skills is lower compared with the degree of satisfaction, there is a possibility that the activity of the event was focused to sensual entertainments, and it did not facilitate inner mental development. Data analysis of SEAS found it clear that various developmental aspects of generic skills are related with the contents of the school events.

Keywords: *school events analyzing system, statistical analysis, school events, generic skills, satisfaction*

Assessing leadership characteristics across cultures

Chair(s): MOBLEY, W. H. (China Europe International Business School; Mobley Group Pacific)

Discussant(s): ARVEY, R. D. (National University of Singapore)

As economies become increasingly globalized, corporations and industries in many sectors are facing a range of leadership challenges. A deficit of qualified global leaders and the impact of poor leadership are highly evident. Understanding effective assessment of leadership characteristics in different cultures can help corporations not only to recruit high quality people, but also to identify high potentials for development in order to compete successfully globally. In this session, we have invited scholars from mainland China and Hong Kong China, France, Thailand, United Kingdom and the United States to discuss assessment of leadership, especially the application of personality instruments in leadership assessment in both Western and Eastern cultures. This symposium aims to better understand the following issues: (1) Key leadership characteristics, including personality traits, cognitive abilities, and behaviors in both Eastern and Western cultures; (2) Differences and similarities of leadership characteristics across cultures; (3) How can these characteristics be most effectively assessed across cultures? (4) What are the relationships among personality, competency and leadership behaviors? (5) How to assess and develop leaders based on the research findings? The presenters in this session will present data collected in China (including Hong Kong), Thailand and US from administration of the Work Behavior Inventory, Applied Reasoning Tests, Hogan Personality Inventory, SHL Universal Competency Questionnaire, among others. Specific issues will be addressed including leadership characteristics in these countries, different patterns of response, and personality's impact on leadership behaviors. Following on, the presenters will discuss applications and share personal experiences in

leadership assessment and development in different cultures, and directions for new areas of research in using personality assessment tools across cultures.

Cross-cultural predictors of leadership effectiveness

PAGE, R. C. (Assessment Associates International)

This presentation addresses three strategically important issues: 1) What are the key predictors of leadership effectiveness? 2) How can these characteristics be most effectively assessed across cultures? 3) What are the characteristics of effective cross-cultural leadership assessment tools? To address these questions, we developed a set of cross-cultural cognitive ability and behavioral styles (personality) assessments. Using the Applied Reasoning Test (ART), we have investigated three facets of cognitive ability, including verbal ability, numerical ability and perceptual ability. In addition, using the Work Behavior Inventory (WBI), we have assessed a broad array of behavioral styles, including facets of the Big Five Personality Factors, as well as facets of Leadership Styles and Selling/Influencing styles. Over 2,000 individuals from China, Thailand and North America have completed one or more of these assessments. Our findings suggest that the same types of leadership dimensions predict leadership effectiveness in China and Thailand as in North America. The structural equivalence of the ART and the WBI was investigated using Chinese, Thai and North American samples. Results indicate that leadership cognitive ability is in close alignment with the two-factor model of Vernon (1965), consisting of Verbal and Perceptual ability. Moreover, analysis of the WBI indicates a common set of five factors that are consistent with the Big Five personality factors (Norman, 1963). Important conclusions from our findings are that there are a core set of leadership success characteristics that are relatively universal across cultures. A uniform set of assessment tools and a uniform set of leadership standards may be used across cultures to assess leadership effectiveness. However, it is critically important to define these characteristics and measures in ways

that assure cultural and linguistic relevance to specific cultures. Specific examples of how to address these issues will be discussed.

Keywords: leadership, cross-cultural, assessment, work Behavior Inventory, big five model of personality

Use and application of Big 5 personality assessment tools in cross cultural settings

PAYNE, T. (Human Resources, Asia for Hanesbrands Inc.)

The aim of this study is to provide actual experience in the application and use of cross cultural personality assessment in selection decisions in Asia. This presentation will focus on application and use of Big 5 personality tests delivered in Thailand across a number of different organizations. Data collected from administration of a Big 5 Personality assessment tool over a four year period in Thailand will be presented. The instrument is the Work Behavior Inventory (WBI). It has been translated into Thai and revised over a number of years. The WBI consistently differentiates the Big 5 factors in the Thai language version and shows high reliabilities. The reliabilities in Thailand are very similar to those in the English version. The presentation will cover some of the key learning's of practitioners. The results will show that the WBI is a reliable Big 5 Personality assessment tool both in English and in Thai. The presenter will present data collected over a number of applications and also share both the personal experience in application of the WBI in selection and candidate assessment and will discuss the possibilities for new areas of research in using personality assessment tools cross culturally. Specific areas addressed will be any differences between Asian and Western response patterns and whether there are any differences in the Big 5 factors or any individual facets of personality traits between Asian and Western candidates. High quality Big 5 personality tests can be used cross culturally as long as careful and reliable translations are used. Administering personality assessment tools provides value in the selection decision as long as the instruments are properly translated and reliabilities in the foreign language version tested in the same way as the English versions.

Keywords: *personality assessment, big five model of personality, Work Behavior Inventory, cross-cultural, Thailand*

Personality, leadership competency and daily behaviour

WANG, Y. (The University of Sheffield), GRIFFIN, M. (University of Sheffield), LI, M. (ESC Rennes School of Business)

The aim of this study was to investigate the relationship among personality traits, daily behaviours and leadership competencies and to disentangle the process through which personality traits are translated into leadership competencies. Two personality instruments, Hogan Personality Inventory and Work Behavior Inventory, and one competency instrument, the SHL Universal Competency Framework (UCF) questionnaire were administered to 100 MBA students attending a leadership module. In addition, a diary study was carried out by distributing a daily behaviour questionnaire on eight days in a month. The results showed: (1) For both Chinese and non-Chinese MBAs, big five personality was found to well relate to conceptually relevant leadership competencies, suggesting that leadership characteristics are preceded by theoretically relevant personality traits. (2) Chinese and non-Chinese MBAs differ on several leadership competencies, especially the competencies preceded by extraversion trait. However, the prediction of personality on leadership competency did not appear to be different across the two groups. (3) Different patterns of relationship between personality and daily behaviours were found between Chinese and non-Chinese. Personality relates to the central tendency of daily behaviours much better in the non-Chinese group than in the Chinese group, suggesting Chinese are less traited and thus personality assessment may be less effective in predicting the daily behaviours of Chinese. (4) On task-related leadership competencies, personality traits translate into competency as mediated by daily behaviours. (5) The variability of daily behaviour appears as useful predictors, over and above trait and mean-level daily behaviour, on several leadership competencies. Specifically, higher scores on leadership competencies are

predicted by lower variability on conscientious behaviour yet more variability on open behaviour. The following conclusions were made: (1) While Chinese may be more inclined to change their behaviours on a daily basis, their general leadership characteristics are as predictable as non-Chinese. (2) Daily behaviours contain useful information in predicting leadership competencies. The central tendency of daily behaviours may mediate trait-competency relationships, and the variability of daily behaviours may incrementally predict leadership competencies, over and above personality traits.

Keywords: *personality traits, leadership, personality assessment, big five model of personality, Work Behavior Inventory*

Defining Chinese leadership behaviors

TO, C. (Moblely Group Pacific), CHEUNG, F. (Chinese University of Hong Kong)

The present research examined Chinese leadership behaviors by adapting the behavioral complexity model developed by Quinn (1988) as a basic framework, and then integrating indigenous leadership concepts that are rooted in the Chinese culture. The exhibition of Moral Behaviors was considered salient to be integrated as "morality" has been a core concept of Confucius philosophy, which has been influential on a diverse range of Chinese social behaviors. The research was carried out first with two pilot studies to prepare the survey protocols. In the Main Study, completed survey questionnaires were analyzed on a valid sample of 152 senior executives at directorate level or above, including 22 CEOs and managing directors from organizations in Hong Kong and China; and their immediate superiors ($N = 111$) and at least two immediate subordinates ($N = 334$). Results suggested that Chinese leadership behaviors could be conceptualized as a constellation of five key aspects: The four aspects in Quinn's model, including Leading Change (focus on innovations and transformation of an organization), Producing Results (focus on goal accomplishment and task performance), Managing Processes (focus on efficiency of internal systems and procedures), Relating to People (focus on

commitment to human resources), as well as the indigenous aspect of Exhibiting Moral Behaviors (focus on moral righteousness as a person). In addition, different parties in the organization (executives themselves, their boss and subordinates) perceived similarly about the constellation of Chinese leadership behaviors. This extended leadership behavior framework will also be useful for future generation of assessment protocols for executive assessment and development in the Chinese work setting.

Keywords: leadership, moral behaviors, social behaviour, Hong Kong, China

Assessment in the context of the International classification of Functioning, Disability and Health (ICF)

Chair(s): MPOFU, E. (University of Sydney), OAKLAND, T. (University of Florida)

Discussant(s): BIGGS, H. (Queensland University of Technology)

Assessment, and the purposes for which it intended is at its best when the outcomes from it can be interlinked to address activity and participation issues important to clients. The International Classification of Functioning, Disability and Health (ICF) provides a parsimonious framework for targeting assessments and interpreting the resulting evidence to inform intervention decisions and in language that makes sense to both the clients and also multidisciplinary teams of service providers. It also pushes to the fore the purposes for which assessment is being sought (or provided) in relation to real like outcomes such as to enable activity and participation in preferred settings. This symposium seeks to show case exemplary practices in the use of the World Health Organization's (WHO) ICF to guide rehabilitation and health assessments. The key learning objectives of this symposium are: (1) Promote an understanding of the ICF model and its implications for rehabilitation services; (2) Promote an understanding of relationships between personal values and ICF's participation; (3) Illustrate the utility of the ICF as a framework for assessing competencies in activities of daily living; (4) Explicate influences on participation for older community living women; (5) Foster an appreciation of the importance of qualifiers to the participation domain in using the ICF; (6) Identify factors that may influence test performance and/or alter the basic interpretation of findings.

Review of the International classification of Functioning, Disability and Health

(ICF) and general implications for assessment

OAKLAND, T. (University of Florida)

This presentation is intended to promote an understanding of the WHO's International Classification of Functioning, Disability and Health (ICF), including its goals: to understand and study health and health-related conditions from a scientific base, establish a common language to facilitate communication, to compare reliable data internationally and over time, and to provide a coding framework for health information systems. The presentation will discuss the ICF model that views disability as multidimensional (at body, activity and participation/social levels) created by the interaction of health conditions together with personal and environmental qualities. These include eight body functions (e.g., mental, voice/speech, sensory/pain, skin, neuromusculoskeletal, cardiovascular, digestive, and reproductive functions) and eight structures (e.g., nervous, voice/speech, sensory, skin, movement, cardiovascular, digestive, and reproductive systems) as well as environmental (i.e., products and technology, natural and human-made environment, support and relationships, attitudes, and services and policies) and personal (e.g., one's gender, race, age, education, religion, lifestyle, social background, and pattern of life experiences) factors. These conditions impact a person's desired activities (e.g., tasks a person is able to perform) and desired participation (e.g., tasks a person does perform and that become integrated into one's life). Activities and participation include the following nine domains: learning and applying knowledge, general tasks and demands, communication, mobility, self-care, domestic life, interpersonal interactions and relationships, major life areas, and community, social, and civic life. Implications for assessment in light of this model will be discussed. The ICF model offers a framework for describing human functioning dimensions that complement and extend purely diagnostic information. Information about one's diagnosis or diagnoses coupled with information about functioning offer a multi-dimensional description of an individual's current clinical picture and environmental

factors that may buffer, exacerbate, or otherwise affect that picture. The ICF model allows mental health care practitioners to describe the whole health experience, including environmental factors, and to compare the experiences of patients with different conditions. The model also allows us to compare the experiences of a given patient over the course of his or her treatment.

Keywords: International Classification, World Health Organization, health information systems, diagnostic information, treatment

The impact of personal values on one's participation in the community among persons with chronic illness or disability

MPOFU, E. (University of Sydney)

The study examined community and independent living preferences among people living with a disability or chronic illness. These qualities exemplify International Classification of Functioning, Disability and Health's (ICF) concept of participation. Successful community and independent living constitutes the quintessence of quality of life with a chronic illness or disability. Qualities of community living and independent living that are preferred by individual people with chronic illness and disability are unknown to rehabilitation providers yet are important for consumer-responsive rehabilitation services. Sixty-eight individuals who displayed various disabilities and chronic medical conditions completed an ethnographic study in which a free response procedure was used to nominate statements important to their community and independent living with a disability. Data were analyzed using concept mapping, a mixed method approach that is useful for constructing informant-oriented constructs about social reality and for constructing instruments that capture the substantive life experience domains that influence community and independent solutions for the informants. People with chronic illness or disability valued social inclusion and access and support policies for full participation. They also preferred roles that they contribute to the welfare of others in and serving as a resource to the community. The individuals with disabilities also valued family life in their community living options.

Efforts to promote participation through community and independent living of people with chronic illness and disability should address the values individuals seek to enact for a preferred quality of life. Ethnographic approaches are useful for constructing the components of participant-oriented domains of community and independent living with chronic illness or disability.

Keywords: *disability, chronic illness, community, independent living, rehabilitation*

Self-reporting of participation and environment: Can we make more use of Australia's International classification of Functioning, Disability and Health (ICF)-related national data standards?

MADDEN, R. (University of Sydney)

This presentation discusses the value of basing self-reports of participation and environmental factors on Australia's International Classification of Functioning, Disability and Health (ICF)-related national data standards. Methods that rely on self-report enable people to prepare to talk with service providers, evaluate services, reflect on their personal goals, and prompt for areas of importance requiring attention. The ICF provides four options for distinguishing activities and participation. A second set of qualifiers for activities and participation was used in the Australian data standards in an attempt to operationalise the fourth option, thus allowing all domains to be either activities or participation. The use of the qualifier 'satisfaction with participation' facilitated a summary of each person's views about participation on a number of criteria. Preliminary testing suggested the use of these qualifiers has utility for purposes beyond those originally intended. The use of the qualifiers appears to have potential value in various settings. Further research on their use will provide evidence as to whether this qualifier concept can facilitate self-reporting of participation and for identifying related environmental facilitators and barriers.

Keywords: *self-report, environmental factors, International Classification of Functioning,*

Disability and Health, service providers, Australian data standards

Measures of functional performance

GRANGER, C. (University of Buffalo), GILIWESKI, M. (Loma Linda University), CARLIN, M. (University of Buffalo)

The presentation demonstrates the usefulness of documenting and measuring change in functional abilities and measuring outcomes for patients in medical rehabilitation; and relates the clinical applications to the World Health Organization's International Classification of Functioning, Disability, and Health (ICF). The basis for functional assessment is documenting functional change, guiding treatment, and estimating the types and amounts of care that must be provided by familial or hired caregivers, supportive devices, and environmental alterations. The continuum of care follows patients over time, and through various venues of care, in order to measure and manage outcomes and predict which types of patients benefit most in which settings at which times during their illness, and the duration of services and costs. A case study shows a stroke patient followed through inpatient and outpatient care, with functional findings compared with the ICF taxonomy. Application also is made of outcomes measurement to pharmaceutical testing and to projecting function of stroke patients during rehabilitation. The pharmaceutical research showed, using the FIM[®] instrument, that multiple sclerosis patients lost less function using an interferon β -1a drug. The research on stroke patients in an acute care hospital showed that the AlphaFIM[®] instrument could predict patient functional levels at admission to and discharge from a rehabilitation hospital. The stroke case study, using the LIFEwareSM System for outpatients, showed functional change over time and specific deficits to be addressed clinically, while mapping each functional deficit to ICF classifications. It has been a challenging process creating functional assessment instruments that describe motor and cognitive domains, in terms of level of competence in activities of daily living and pain. Functional status now joins medical status data, creating a complete profile of a medical rehabilitation patient's strengths and

deficits related to his or her disability. Functional assessment will continue to be important for describing outcomes of patient care, particularly for persons with varying degrees of disablement secondary to chronic health conditions, especially as the U.S. population ages. Functional assessment ultimately will lead to interventions that may be targeted, and this will lead to better and more cost-effective care.

Keywords: functional abilities, rehabilitation, International Classification of Functioning, Disability, and Health, functional assessment, continuum of care

Can the international classification of functioning, disability and health (ICF) be used as a framework to explain falls in older Australian women?

MACKENZIE, L. (University of Sydney)

This study mapped the factors associated with falls risk in the Australian Longitudinal study of Women's Health (ALSWH) cohort dataset and analysed them to empirically confirm relationships between international classification of functioning, disability and health (ICF) components. In a sub-group of 568 older women, items from five ALSWH surveys conducted from 1996-2005 were collected. ALSWH data consisted of a broad range of health information relevant to the ICF. Two occupational therapy (OT) researchers individually mapped these ALSWH survey items to the primary ICF components. Agreement between the raters was evaluated. The 10 linking rules by Cieza et al. and the eight updated rules by Cieza et al. were then used to link the data to the ICF. Results from both mapping exercises were compared and a consensus decision was made about the final linking of the items. Variables were longitudinally tested against the outcome of falls. Logistic regression model building processes were undertaken for all the defined components of the ICF. Four hundred and ten items were mapped across the surveys. The OT raters differed on the placement of only seven items. Differences were related to interpretations of activity and participation. Mapping using the 10 rules method allocated items differently due to personal factors not

being classified and activity and participation being classified together. The ICF components of body functions, health condition, environmental factors, and the activity and participation component were significantly associated with falls. The personal factors component and the "not-covered" component did not contribute to falls in the final model. The mapping exercise was challenging to accommodate both the professional interpretations of the OT raters and the rules published for this purpose. The study demonstrated that the ICF can be applied to understand falls risk in a community sample of older women. However, the ICF categories need to be further developed in the definition of personal factors and environmental factors and a review of the distinction between activity and participation.

Keywords: women's health, International Classification of Functioning, Disability, and Health, environmental factors, women, occupational therapy

Attachment, empathy, values, and parental relationships and expectations in relation with prosocial behaviour and aggression in children and adolescents

Chair(s): RICHAUD, M. C. (CIIPME - CONICET)

Prosocial behaviour and aggression are the outcome of multiple individual and situational factors. In this symposium the influence of attachment, parental practices, expectations and modeling, values, and prosocial moral reasoning over prosocial behaviour, empathy, aggression, and emotional stability, will be analyzed. The Symposium will begin with the study of the relations between attachment and proactive and reactive aggression in children 4 to 8 years old. We will then discuss the influence of children perceptions of parental practices, expectations, and prosocial behaviour on children and adolescent's prosocial behaviour, and the links between prosocial moral reasoning in its different dimensions and the ability to build empathetic and prosocial relationships. Finally, we will present results which refer to the influence of parenting practices in prosocial behavior, aggression and emotional instability in children who experience poverty, and the value system, ethical positions and attitudes towards alcohol in adolescents and young adults aged 15 to 24 years old.

Proactive and reactive aggression in relation to children's attachment

CARRASCO, M. A. (UNED)

This study examined the relations between children's attachment and proactive and reactive aggression in order to improve proactive social adaptation. Sixty children ranging from 4 to 8 years old, and their mothers or care takers were recruited through

childcare centers ($n = 30$) and a public school ($n = 30$). The attachment Behavior Q-Set and a story completion task were used to assess to attachment representations as well as cognitive, behavioral and emotional components of child's attachment. A significant relation was found between attachment and aggression, however, reactive and proactive aggression were explained by different components of children's attachment. The importance of studying different components of attachment rather than attachment as a one-dimensional construct in relation to children's social adaptation will be discussed.

Keywords: *attachment, reactive aggression, proactive aggression, social adaptation, children*

Influence of parental practices expectations and modeling on children and adolescents prosocial behavior

RICHAUD, M. C. (CIIPME - CONICET)

Prosocial behaviour is the outcome of multiple individual and situational factors including parenting variables. Prior researchers have demonstrated that parental warmth and acceptance facilitates prosocial actions and that parental practices are positively related to prosocial behaviors (Carlo et al., 2007). Therefore, positive parenting styles (e.g., acceptance) and practices (e.g., use of social rewards) were expected to be positively associated with prosocial behaviours. However there is growing interest in identifying specific parenting practices, rather than assessing general interaction styles, to better predict social behaviours. The objective of this presentation is to study the influence of children perceptions of parental practices, expectations, and prosocial behaviour on children and adolescent prosocial behaviour. This study included a sample of 934 children and adolescents of varying levels of SES, aged 10 to 15 years from primary and secondary schools in Buenos Aires, Argentina. The measures were adapted for use with children and adolescents in Argentina and included: The Parent Expect Scale (Wyatt & Carlo, 2002), Parenting Practice Measure (PPM; Carlo, et al., 2007), and Prosocial Tendencies Measure (PTM-R) which includes: Public, Emotional,

Dire, Anonymous, Altruism, and Compliant dimensions (Carlo et al., 2003). The prosocial tendency that children and adolescents perceive in their parents, on the other hand, was studied through two questionnaires; one for mothers and one for fathers, with 21 items each, corresponding to the PTM-R 21 items but referred to parents. Multiple regression analyses indicate different effects of parental expectations, practices and modeling on children and adolescents different dimensions of prosocial behaviors. Further regression analyses will be conducted to examine whether these relations vary by SES, age, and gender. The principal influence between parental variables on children and adolescent prosocial behaviour is that of prosocial modeling, that is, rather than parents self-perceived prosocial behaviour, it is actually the prosocial behaviour that children and adolescents perceive in their parents that could really influence the development of their own prosocial behaviour. Furthermore, acceptance, mainly from the mother, is positively related to Anonymous and Altruism prosocial dimensions and negatively to public prosocial dimension.

Keywords: prosocial behaviour, parental practices, social behaviour, prosocial modeling, parenting

Interaction between cognitive and emotional processes in prosocial disposition

MESTRE, M. V (Universitat de València)

Studies focused on the empirical evaluation of psychological processes related to prosocial development have highlighted the important part played by empathy as a factor of prosocial behaviour. An empathetic response includes the ability to understand others and share their emotional situation, this involving affection. Thus, empathy is comprised of both cognitive and emotional elements. Prosocial behaviour defines voluntary conducts aimed at helping others. Altruistic behaviour could be said to be prosocial but not the other way around. Prosocial behaviour focuses on the effects. We present the findings of an empirical study of an adolescent population. The aim is to analyse the links between prosocial moral reasoning in its different dimensions and the ability to build empathetic and prosocial relationships. The

sample consisted of 1,557 Valencian adolescents aged 12 to 15 years (47% girls, 53% boys). They were all secondary school students from 36 schools in the province of Valencia. The results show higher empathy and prosocial behaviour levels in girls than in boys and prosocial behaviour values are higher in younger individuals. Positive correlations were found between empathy and prosocial behaviour, and both of these correlated with prosocial moral reasoning. In analysing the relevance of the relationship between moral reasoning and empathy variables or between moral reasoning and prosocial behaviour, we did not only find links between both variables but also significant negative connections of empathy with hedonist reasoning (approval-oriented), and positive ones with stereotyping. We also found negative links with aggression. Along the same lines, prosocial behaviour had significant positive links with reasoning in the following dimensions: internalisation, stereotyping, and needs-oriented. Similarly, negative ones were found for aggression. The findings support the relations between empathy, prosocial behaviour and prosocial moral reasoning. The "selfish" reasonings centred on the personal benefit (hedonistic reasoning) disable empathic disposition and facilitates the aggressive behavior.

Keywords: prosocial development, empathy, moral reasoning, prosocial behaviour, aggression

The perception of parenting styles and its influence on prosociality, aggression and emotional instability in children in social vulnerability due to poverty

LEMOS, V. (CIIPME - CONICET)

The influence of parenting practices in the emotional and social development of children has been widely studied. The traditional model of socialization, which assumes that if the parents behave in a certain way the children perceive such conduct and interiorize it, has proven to be insufficient in view of the fact that, in the internalization of parenting styles, the interpretation and the acceptance that the child possesses said messages plays an important role. The interpretation and acceptance will also depend on the parents-children relationship and how far the child

feels he/she has participated in such relationship or if he/she feels the parents have imposed it. This is the reason why this study starts with the perception children have of parenting practices and assess the influence of such perception in prosocial behavior, aggression and emotional instability. The study was carry out in a sample of 269 children between 10 and 12 years of age both male and female, in four schools in the city of Buenos Aires and Paraná (Argentina). The children are in a context of vulnerability due to poverty in less supporting parenting styles that do not encourage prosociality, thus this is very important area to be studied. The following instruments were used: Argentine Scale of Perception of Relationships with Parents for 8 to 12-year old children (Richaud de Minzi, 2004), Prosocial Behavior Scale (Caprara and Pastorelli, 1993; Del Barrio, Moreno, & López, 2001), Emotional Instability Scale (Caprara & Pastorelli, 1993; Del Barrio, et al., 2001) and Physical and Verbal Aggression Scale (Caprara & Pastorelli, 1993; Del Barrio, et al., 2001). The results show how the perception of certain parenting styles, mainly acceptance or pathological control from the mother, influences both prosocial behavior and aggression, as well as the emotional stability of children. The predominant kind of parental style among groups at risk should favor, through negligence, punishment-based control and poor acceptance, a weak prosocial behaviour and a high aggression and emotional instability. In view of the fact that the key factor of protection in families is the child's perception of the availability of his parents' emotional and instrumental support, when dealing with children at environmental risk it is crucially important to work with the parents.

Keywords: parenting practices, social development, prosocial behaviour, emotional instability, aggression

Social values, ethical positions and attitudes towards alcohol in adolescents and young adults

MORENO, J. E. (CIIPME - CONICET)

The aim of this paper is to compare the value system, ethical positions and attitudes towards alcohol in adolescents and young adults,

grouped in the following categories: only study, only work, work and study, and neither work nor study. In recent years, the number of adolescents who quit school and do not find or look for a job has increased in our country. Furthermore, alcohol intake in youth and adolescents is becoming an issue of growing social concern in recent years. As a consequence, it is necessary to study the beliefs, values and attitudes of this population before developing preventive programs. This research comprises a sample of 350 adolescents and young adults from 15 to 24 years old, from both sexes. The instruments used were: Rokeach Value Survey, Ethical Position Questionnaire (EPQ) by D. Forsyth and Attitudes towards Alcohol (ACTICOL-92) by Pons Diez. To compare the differences among the four groups, we used the Multivariate Analyses of Variance (Manova) and the variance rank analyses (Kruskal Wallis). The main results showed us that four groups have a high appraisal of family security. On the other hand, religious values are less ranked. The neither-work-nor-study group gives more importance to be obedient and less importance to be loving, intellectual and logical. Besides, they considers alcohol intake as a way of improving social relationships, and avoiding reality. The only study group and the work-and-study group are more ethical idealistic than the neither-work-nor-study group. No significant differences were found between the neither-work-nor-study group and the other groups as we would expect.

Keywords: alcohol use, adolescents, social relationships, values, attitudes

Automated e-Interventions

Minimal contact public health e-interventions for depression and anxiety

GRIFFITHS, K. (ANU)

There is a rapidly growing body of research demonstrating the efficacy of e-mental health programs when delivered within a controlled research context. This paper describes two open access automated therapy programs, MoodGYM and e-couch, the evidence for their efficacy across a range of settings, and the factors which predict user outcomes including the effect of minimal versus no contact. A systematic presentation of the data from a series of trials of the effectiveness of the programs undertaken in different settings and under varying conditions of support ranging from no tracking to minimal contact from lay interviewers. These programs are effective in reducing symptoms of depression and anxiety in a range of settings and contexts, for a range of ages, for both rural and metropolitan residents, and with and without minimal external support. Substantial public health gains can be achieved with the use of open access automated Internet mental health programs.

Keywords: *e-mental health programs, depression, anxiety, Internet mental health programs*

World wide wellbeing: Health promotion online

MITCHELL, J. (Monash University)

This session presents the results of a longitudinal study that tested the efficacy of two independent online positive psychology interventions (OPPIs) - strengths and mindfulness - to enhance wellbeing and reduce mental illness symptoms. The study included 623 adult participants (81% female, 70.5% Australian residents, mean age 39.9 years) in a randomised controlled trial investigating longitudinal outcomes for two positive psychology interventions (strengths and

mindfulness) compared to a waitlist control (WC). Self-report measures were administered at baseline, post-intervention, one-month and three-month follow-up, and included the Personal Well-being Index-Adult, Satisfaction With Life Scale, Modified Differential Emotions Scale, Psychological Well-Being, Mental Health Continuum – Short Form, and the Depression Anxiety Stress Scale-21. Potential moderating variables tested included human support (via email) and baseline levels of well-being and depression symptoms. Hierarchical Linear Modelling analyses indicated that, compared to the WC, the Strengths group had significant average monthly increases, up to three months, on measures of well-being (PWI-A, mDES positive affect, PWB, MHC-SF). The Mindfulness group had a significant reduction in anxiety symptoms. Various moderating effects were found, for example, increased life satisfaction for Mindfulness group participants with elevated depression symptoms at baseline. The results support the efficacy of strengths and mindfulness OPPIs to enhance well-being and reduce illness symptoms. The moderating effects highlight the importance of tailoring interventions to the individual. The internet offers an opportunity to deliver fully automated, tailored interventions as part of an accessible and sustainable health promotion and illness prevention strategy.

Keywords: *online positive psychology interventions, mindfulness, anxiety, well-being, health promotion*

The myCompass program for monitoring and managing mild to moderate depression, anxiety and stress

PROUDFOOT, J. (University of New South Wales)

The benefits of self-monitoring and self-help on symptom severity, coping and quality of life are well-documented. Historically, monitoring has been carried out using paper and pencil diaries, but retrospective recall biases and non-adherence reduce their validity. In Australia, 65% of individuals with mental health conditions do not access services and many instead are turning to self-care management practices. The Black Dog Institute has developed a program to assist individuals to self-monitor and self-manage mild to

moderate depression, anxiety and stress using their mobile phone. Take-up of mobile phones in Australia has reached saturation point in Australia, they are carried on the person, they are usually turned on and functionality is continually improving. The myCompass program enables 'just in time' monitoring of moods, events, medication and behaviours through the use of Internet and mobile technologies. People can choose at what time of the day they want to track their mood or behaviour, and whether they'd like to receive regular sms or email messages to prompt them. Users receive graphical feedback of their data, with situational information which helps them to identify patterns and triggers of their symptoms. They may also choose to receive brief interactive cognitive-behavioural strategies, as well as information and tips to help them manage depression, anxiety and stress. This paper will present preliminary findings from a pilot study testing the usability and potential effectiveness of the fully automated stand-alone digital tool. A pilot study involving 30 participants with mild-to-moderate depression, anxiety or stress was undertaken in January-February 2010. Individuals accessed the program on their mobile phone and/or computer for six weeks. Outcomes measures are the Depression Anxiety and Stress Scale, Work and Social Adjustment Scale and health service usage. The pilot study is still underway: results will be presented at the conference. myCompass offers a tool for psychologists and other healthcare professionals to use in their practice to assist clients to self-monitor and self-manage their symptoms and behaviour.

Keywords: self-monitoring, self-help, depression, anxiety, stress

Bandwidth-fidelity dilemma and academic and job performance: Advocating narrow over broad traits

Chair(s): MUSSEL, P. (Universität Hohenheim)

Despite some recent controversy (Morgeson, Campion, Dipboye, Hollenbeck, Murphy, & Schmitt, 2007a, b), the use of personality tests to predict academic and job performance is widely accepted (Barrick, & Mount, 1991; Ones, Dilchert, Viswesvaran, & Judge, 2007; Tett, & Christiansen, 2007). However, in terms of the Big Five model of personality, validities are only small to moderate, compared with cognitive abilities. Recently, several authors advocated narrow over broad personality constructs to maximize predictive validity (Tett & Christiansen, 2007, 2008). For example, Rothstein and Goffin (2006) found eleven studies suggesting that prediction of job performance by use of narrow measures of personality is significantly higher, compared to broad measures. However, referring to the bandwidth-fidelity dilemma (Ones & Viswesvaran, 1996; Schneider, Hough, & Dunnette, 1996), this has been quite controversially discussed. The symposium presents several papers from different European countries investigating the utility of narrow facets, compared to broad traits, for predicting academic and job performance. While using different methodological approaches and focusing on different constructs and criteria, these papers suggest that future research should rather focus on the facet level.

Predicting academic success with the Big Five rated from different points of view: Self-rated, other-rated, and faked

DANAY, E. (Humboldt-Universität zu Berlin)

Self-ratings of personality incrementally predict academic success above and beyond general intelligence. The present longitudinal study aimed at replicating these findings and

investigating the possible predictive increment of the same ratings when made by others or when intentionally distorted. Research in this area often focuses on domain level scores of the Big Five and intelligence. In contrast, within this study facet scores were collected. Participants ($N = 145$) had to compile a personality questionnaire twice. At first they were given neutral instructions. The second time they were asked to imagine a specific applicant setting. Furthermore, two peers had to rate each participant. Additionally, verbal, numerical, and figural reasoning scores were obtained. Grades in a statistics exam obtained 2 months after the initial testing served as criterion. Results replicate prior findings and show incremental validity for self- and other-rated personality, which was stable after controlling for intelligence facets. Faking had no impact on Big Five domain score level but results on facet score level were less encouraging. The present study replicated and extended prior findings regarding the utility of personality facet self- and other-ratings as predictors of academic performance. It could be shown that each perspective contains specific variance neither shared with the other point of view nor with intelligence. With regard to intelligence it could also be shown that it can be advantageous to use facets instead of broader measures. Finally, the results demonstrate the necessity to investigate both criterion validity and faking effects on facet and not just domain level.

Keywords: *personality, big five model of personality, intelligence, performance, personality traits*

Predicting academic performance with personality facets: What role does the examination modality have?

ZIEGLER, M. (Humboldt-Universität zu Berlin),
HEENE, M. (Karl-Franzens-Universität Graz),
BÜHNER, M. (Karl-Franzens-Universität Graz)

Several studies have shown that using personality facet scores as predictors of performance yields better results than using domain level scores. However, so far little attention has been paid to which criterion is being used. In academic settings, oral examinations as well as written examinations

can be distinguished. It is very plausible to assume that personality facets might have differential validities depending on the criterion. Therefore, a possible differential impact of personality domains and facets on academic performance (AP), depending on the examination modality (i.e. written vs. oral), was investigated in a longitudinal study. Three samples of German undergraduate students ($N = 65$ to 127) completed the NEO-PI-R. Within each sample the modality of examinations was either completely written or oral. Two years later their pre-degree grades were obtained. Results indeed support the idea of differential validities for some facets depending on the examination modus. For example, Extraversion and its facet Assertiveness emerged as significant negative predictors of oral performance, but did not predict written examination results. New evidence is provided that measures of personality facets outperform domain level scores. Furthermore, the importance of the criterion is highlighted.

Keywords: *academic performance, personality, extraversion, personality facet, assertiveness*

Does Openness predict Job Performance? Yes – on a Facet Level!

MUSSEL, P. (Universität Hohenheim), SCHULER, S. (Universität Hohenheim), WINTER, C. (Universität Hohenheim), GELLÉRI, P. (Universität Hohenheim)

Openness to experience, the fifth factor of the Big Five personality model, has shown to be uncorrelated with job performance (Barrick & Mount, 1991; Salgado, 1997). However, the internal structure of openness to experience is characterized by large heterogeneity. Based on a theoretical approach, it was predicted that certain aspects (or facets) of openness to experience are relevant for job performance, while others are not. The German version of the NEO-PI-R (Costa & McCrae, 1992) was applied to 395 persons participating voluntarily in the present research. Additionally, four different criteria measures were obtained, including peer-rating of job and academic performance, self-ratings of job performance, school performance, and academic success. Based on extensive internal and external construct validity analyses, we found internal structure of openness to experience to be

characterized by two sub-dimensions, which we labeled perceptual and epistemic, respectively. As expected, only the latter showed criterion-related validity (.21), while the former was negatively correlated (-.08). Regarding the bandwidth-fidelity dilemma, we found strong support for narrow over broad traits when predicting job and academic performance. We conclude that recent studies, while building on openness to experience as a broad trait, underestimated its utility for selection and assessment. Therefore, we conclude that future research should rather focus on the facet level. Regarding practical implications, measures of epistemic openness are recommended as predictors in personnel selection processes.

Keywords: *openness, big five model of personality, job performance, academic performance, academic success*

Differential validity of openness for experience facets and sub-dimensions

WINTER, C. (Universität Hohenheim), GELLÉRI, P. (Universität Hohenheim), SCHULER, S. (Universität Hohenheim)

Openness to experience is the most heterogeneous dimension of the Big Five (Digman, 1990). Recently it has been suggested that two sub-dimensions can be separated (Griffin & Hesketh, 2004) The present study investigates if our sample replicates those findings. To extend prior results of differential validities, openness sub-dimensions were correlated with a number of criteria from different areas of life, such as performance data and criteria reflecting recreation. These criteria were linked to openness sub-dimensions based on theoretical considerations. The openness to experience items from the German version of the NEO-PI-R (Costa & McCrae, 1992) was applied to 511 persons participating voluntarily in the present research. Additionally, a total of 35 different criteria ($N = 46$ to $N = 473$) were obtained via self-report. These criteria were independently rank-ordered by four experts regarding their relevance for openness sub-dimensions. As expected, exploratory factor analysis revealed a two-dimensional structure of openness to experience. Regarding external criteria, these

factors showed largely differential validities. Differences in validities could be predicted by expert ratings of the criteria with 20 % explained variance. A differential view on the openness to experience factor seems promising as correlations to different criteria vary. While epistemic openness to experience was predictive for a wide variety of criteria, perceptual openness correlates mainly with criteria from the recreational area, like artistic hobbies. Regarding the bandwidth-fidelity dilemma, results of the present paper advocate the use of narrow facets compared to broad dimensions to maximize criterion related validity.

Keywords: *openness, big five model of personality, epistemic openness, perceptual openness, performance*

Optimizing the prediction of managerial success: Broad and narrow personality traits in the world of business

BERGNER, S. (Karl-Franzens-Universität Graz), NEUBAUER, A. C. (Karl-Franzens-Universität Graz)

Research concerning the relationship between personality and managerial success has been largely conducted within the framework of the Big Five personality traits. In contrast, the validity of narrow traits has not been adequately addressed. In the present longitudinal study we examine the extent to which narrow personality traits contribute to the prediction of managerial success beyond the Big Five. Moreover, we investigate whether the importance of narrow personality traits varies with respect to different criteria of managerial success. To this end, 140 managers provided personality data on the Big Five and five narrow-band personality traits empirically related to managerial success (i.e., Assertiveness, Leadership Motivation, Social Sensitivity, Conscientious Perfectionism, and Achievement Motivation). Eight as well as 20 months later managerial success was assessed. At both occasions managerial success was measured by income and promotion rate, supervisor ratings on contextual and task performance, as well as self-ratings of job satisfaction. Results suggest that narrow traits add incremental validity over and beyond the Big Five for income and supervisor ratings at

both points in time when criteria were assessed, yet the degree to which they contribute depends on the criteria used. However, no increase in validity was registered for job satisfaction and promotion rate. The present study supports the validity and utility of personality traits for future managerial success. Moreover, the results not only augment research demonstrating that narrow traits can substantially optimize the prediction of real-life criteria but also indicate that the degree to which they contribute varies for each trait and each criterion. However, the duration between predictor and criterion measurement does not influence the incremental validity of narrow traits.

Keywords: personality, managerial success, big five model of personality, personality traits, job satisfaction

Best practices in testing and feedback training for development in a diverse global world

Chair(s): ELLIOTT, R. (MLQ International)

Discussant(s): HESKETH, B. (University of Western Sydney)

This symposium presents seasoned practitioners, authors and researchers from the United Kingdom, China and Australia who have worked extensively on testing standards, psychometric tests, assessor training and coaching for development in different geographical locations around the globe. Challenges in conducting assessments, interpreting data, delivering feedback and establishing goals for development will be discussed along with issues defining best practice in assessor and coach training in different cultural contexts. Psychological assessment tools can contribute to the effective identification of talents and competency characteristics predictive of outcomes for effective organisational functioning. Assessors and those concerned with the identification and development of talent have to possess relevant knowledge and skills and be able to recognise the implication of assessment data on talents' competency, work performance, and likely improvement goals for on-going development. It is critical for assessors to build their savvy in leveraging global best practices in testing and feedback with an appreciation of the local business contexts, standards requirements and cultural sensitivities in talent assessment and development. The Learning objectives for this symposium include: To inform psychologists of current Chinese, Australian and international approaches to developing and implementing standards in psychological testing for effective individual and organisational performance; To provide perspectives on best practices, directions for continuous enhancement of standards, and training requirements for professionals in diverse world contexts; To learn

about available professional standards of psychological testing across different regions in Greater China (Mainland China, Hong Kong, and Taiwan) and challenges in using different types of psychological assessments in the Chinese work setting; To advance practice in leadership development through the integration of empirical leadership knowledge and psychometric assessment with current coaching practice and theory; To inform and stimulate psychologists' awareness of important ethical issues associated with internet testing which have been given less consideration to date; and to highlight the necessity of conducting in depth qualitative and quantitative psychological research into developmental applications of psychometric instruments. This symposium will be of interest to those involved in the review of testing standards, psychometric testing training, and the utilisation of empirical knowledge for talent development in a diverse yet interconnected global world.

Professional standards in using psychological tests in Greater China: Present and future.

TO, C. (Moberly Group Pacific, Hong Kong)

The use of psychological assessments gains increasing popularity in the work setting of Greater China. Users are typically hiring managers and human resources professionals with diverse educational backgrounds and career experiences. Yet there lacks concerted efforts in aligning professional standards across different regions of Greater China, namely Mainland China, Hong Kong, and Taiwan for users to make reference to. The present paper attempts to compare and contrast the professional standards of psychological testing across these different regions. The study would be carried out with desktop research on available ethical principles and code of conducts from Mainland China, Hong Kong, and Taiwan. Critical aspects would be benchmarked with the available information from other overseas authorities such as APA, BPS, and APS. Interviews would be conducted with the professional governing body and corporate users to solicit their perspectives towards the challenges in the professional use of psychological assessments in each of the

locations. Issues related to confidentiality, data interpretation, and intellectual property protection, will be discussed in the context of Greater China. Challenges that users face when using different types of psychological assessments in the Chinese work setting, including aptitude tests and personality tests, will also be highlighted. This paper will shed light on best practices, directions for continuous enhancement of psychological standards, and training requirements for the professionals involved in the use of psychological testing in Greater China.

Keywords: psychological assessment, professional standards, confidentiality, aptitude testing, personality tests

The development and maintenance of Australian standards for test development and use in a burgeoning internet testing industry.

ALLWORTH, E. (Allworth Juniper Organisational Psychologists, Sydney)

Recent years have seen a proliferation of tests, test publishers and test users, spurred on by the expanded access afforded by the internet. Psychologists can no longer claim psychological testing as their protected domain. On the contrary, psychological tests are now a valuable commodity in a burgeoning, and largely deregulated, industry that is characterised by vast discrepancies in quality and standards of test development and use. This paper examines approaches to standardisation and regulation of occupational testing internationally and explores the extent to which current models are applicable and sufficient for the Australian context. More specifically, the review focuses attention on potential threats to ethical practice posed by internet testing. This paper is based on a broader review of international approaches to setting standards for tests and test use. The findings are evaluated in the context of the current debate in Australia - stimulated by the introduction of the new National Registration and Accreditation Scheme (NRAS) due in July 2010 - around the regulation of psychological testing and, more specifically, the ethical implications of internet testing. The review highlights some threats to ethical practice in

internet testing that require greater attention in the setting of testing standards. These relate to: (1) the entry of internet test publishers into the psychologist-client relationship through their access and storage of confidential client test data in their proprietary databases; (2) test users' access to client test data, particularly raw scores; and (3) test users' access to technical information about the psychometric properties of internet tests to enable psychologists to evaluate the tests they use while also protecting the intellectual property of test publishers. The nationalisation of psychologist registration and accreditation in Australia provides an opportunity for the implementation of a system that raises standards of tests and test users to the benefit of the community. The establishment of these standards needs to give due consideration to the unique features of internet testing that have undermined psychologists' access to test data and have threatened their ability to provide an ethical and confidential service to their clients.

Keywords: internet testing, professional standards, standardisation, occupational testing, ethical practice

Getting the balance right: Utilising psychometric assessment inputs and evidence based theories in the coaching 'reflective space' for leadership development.

ELLIOTT, R. (MLQ International, Melbourne)

Discussions within the emergent Coaching Psychology literature often focus on the practice of leadership development. Yet this domain within psychology continues to be disconnected from the considerable empirical literature about leadership and leadership assessment. Similarly, the scientific leadership literature has only recently begun to focus on how leadership is developed. Likely reasons for this include premature domain self-limiting assumptions and restrictions on how scientific knowledge itself progresses. However, this lack of literature cross-engagement is brought into sharp focus for professional leadership development coaches. Recognition of this separation brings an imperative for applied psychology to achieve comprehensive

integration in leadership development. This entails review of current knowledge domain boundaries, techniques, skills and relevant ethical principles and practices. The conceptual framework for the 'coaching reflective space' was presented by Elliott (2007) following systematic client coaching case study analyses and naturalistic participant-observer reflections on actual coaching practice. These methods are extended to include observer review of coaching processes to incorporate scientifically established leadership theories and an examination of necessary associated ethical practices. Additionally, description and review is made of the utilisation of psychometric leadership assessments, such as the MLQ360, to achieve integrated adopted coachee goals informed by such scientific theories. The conceptual framework for the reflective space, extended to leadership assessment and development, provides a cognitive organiser for the systematic utilisation of salient knowledge domains, information inputs and processes within the complex coaching relationship. It demonstrates how evidence based leadership theories, such as the transformational-transactional theory; inform coachee goal attainment without diminishing coachee self-actualisation. It describes and contextualises necessary coach-managed expert and facilitative modalities, and associated ethical transitions, to establish, maintain and bound the reflective space. This paper redefines required parameters in coaching for leadership development (Elliott, 2005) through an extended conceptuality for the coaching reflective space. By proposing a more comprehensive model for leadership coaching it provides guidance for good practice in test utilisation for facilitators and trainers. As a crucible for integration and innovation the conceptual framework for practice itself provides an evaluation point for current coaching and leadership scientific literatures. Suggestions for further research are made.

Keywords: coaching, leadership development, assessment, ethical practice, self-actualisation

Underpinning best testing practice by combining qualitative and quantitative methods

MCDOWELL, A. (University of Surrey)

The aim of this paper is to develop methods for bridging the gulf between psychological research and the way that psychological tests are being used in organisational practice, with particular reference to a cross-cultural context. Much work in testing is purely numbers driven, however this presupposes that relevant constructs and measures need no passport and can indeed be understood and interpreted by considering numbers alone. Whilst such studies are clearly needed to further our understanding, we argue that they need to be augmented by qualitative techniques. The latter are particularly valuable when considering approaches that do not lend themselves to traditional techniques such as factor analysis, locally developed competency based indicators or frameworks are one example. This paper will first present a qualitative synthesis of existing research on testing to demonstrating how we lack an evidence base in particular for developmental applications of testing. This review will be augmented by the integration of existing research, one cross-cultural comparison and one case study investigating leadership in a SE Asian context. Findings demonstrate that whilst at face value psychometric constructs may appear to travel across borders, interpretations and understanding on part of test takers and end users appear to have subtle differences. The content of this paper has implications for test use and interpretation. Qualitative techniques such as focus groups and interviews offer a rich but robust approach to initial validation, that allow better definition of the 'criterion space' (Bartram, 2005), and there is a need to bring relevant research into the psychological domain particularly when considering test use contexts such as leadership development. Finally, we will make the link to emerging test use contexts such as coaching, integrating our recent work on developing guidance for best practice (Smewing & McDowall, 2009; McDowall & Smewing, 2009).

Keywords: psychological research, psychological testing, cross-cultural, leadership, validation

Big-fish-little-pond-effect: Effects of ability grouping on academic self-concept

Chair(s): DUMAS, F. (Aix-Marseille University and CNRS)

Central to this symposium is the "Big-Fish-Little-Pond-Effect" (BFLPE) indicating the power of students' local frame of reference (schools or classes) to form their academic self-concepts (ASCs; see Marsh, & Parker, 1984). According to this effect, equally able students have lower ASCs when attending schools or classes where the average ability levels of classmates is high, and higher ASCs where the average ability is low. Just like most research in this area, the present symposium includes speakers from various countries, namely, Australia, England, France, Hong Kong, United States, and Singapore. First speaker presents the theoretical and methodological foundations of the BFLPE, state of the arts research focusing on the external validity of this effect based on cross-cultural comparisons, and practical implications for parents and teachers. The second speaker examines potential moderators of the BFLPE including individual ability, cognitive and metacognitive learning strategies, motivational orientations, and individual preferences for the learning environment. Consequences on streaming to relationship with parents, stress, and others well-being factors are also discussed. The third speaker further examines the BFLPE in the contexts of gender and ethnicity; and also whether student differences in motivational goals, academic engagement dimensions, and basic value orientations reduce or exacerbate the BFLPE. To answer Dai and Rinn's (2008) criticism that forced social comparison is only inferred and deliberate upward social comparison ignored in the context of the BFLPE, the fourth speaker shows recent data clarifying the role of these two types of social comparisons in this context, their respective influence on academic performances, and underlying motivational dynamics. Finally, the fifth speaker gives an overview of recent advances in self-

concept theory and research to demonstrate the pervasive significance of the self-concept construct for multiple educational interventions.

Big-fish-little-pond-effect: Effects of ability grouping on academic self-concept

MARSH, H. (University of Oxford, UK)

The big-fish-little-pond effect (BFLPE) predicts that equally able students have lower academic self-concepts (ASCs) when attending schools or classes where the average ability levels of classmates is high, and higher academic self-concepts (ASCs) where the average ability is low. Because of the importance of ASC in predicting future achievement, coursework selection, and educational attainment, the results have important implications for the ways in which schools are organized (e.g., tracking, ability grouping, academically selective schools, gifted education programs). I briefly summarize minimal conditions and alternative tests of the BFLPE, and its theoretical, empirical, and policy-related implications. Special attention is given to the effects of ability grouping in relation to both gifted and learning-challenged students, and to the theoretical juxtaposition between the BFLPE and social comparison theory. Based extensive research, BFLPE findings are remarkably robust, generalizing over a wide variety of different individual, classroom, and school characteristics, settings, countries, long-term follow-ups, and research designs. Studies with the all three OECD-PISA databases (large, nationally representative samples of up to 57 countries) show the cross-cultural generalizability of the BFLPE. Interactions between the BFLPE and potential moderators are consistently very small or not statistically significant. The most widely studied potential moderator is individual student ability, but the BFLPE generalizes well over different student ability levels. The BFLPE is stable and long-lasting; the negative effects of attending academically selective schools on ASC increase the longer a student remains in the same school, and show no diminution two or four years after high school graduation. Although the BFLPE refers specifically to effects on ASC, there is a growing body of research demonstrating negative effects of school-

average ability on other important outcomes (e.g., achievement, coursework selection, academic aspirations) that are mediated in part by ASC. BFLPE research represents a methodological-substantive synergy in which new and evolving statistical approaches are applied to substantively important issues with significant implications for policy and practice. I conclude with a review the methodological developments in BFLPE research, leading to new multilevel structural equation models, unresolved issues and directions for further research.

Keywords: big-fish-little-pond effect, self-concept, schools, gifted students, learning-challenged students

The big-fish-little-pond effect: An Australian story

SEATON, M. (Centre for Educational Research, University of Western, Sydney)

Big-fish-little-pond effect (BFLPE) research has demonstrated that academic self-concept is negatively affected by attending high-ability classes and schools. The current paper aimed to describe BFLPE research that has been undertaken in Australia. It began by describing some of the early Australian BFLPE research undertaken by Marsh and colleagues and continued by detailing two new Australian studies. The first of these studies examined whether the BFLPE for Australian students could be reduced, or was exacerbated by, a variety of individual difference constructs. The main aim of the second study was to measure how different schooling settings (academically selective and non-selective) impact on students both academically and psychologically. Participants in the first of these studies were 15-year-old Australian students who took part in the Program for International Student Assessment (2003; $N = 12,383$). Using multilevel modelling, eight BFLPE moderators were examined. These included individual ability, cognitive and metacognitive learning strategies, motivational orientations, and individual preferences for the learning environment. The second study discussed in the current paper concerned an ongoing study in eight NSW high schools. Participants attended either one of two academically

selective high-ability schools ($n = 734$), or one of six comprehensive mixed-ability schools ($n = 2,048$). A range of psychosocial wellbeing factors was examined, including relationships with parents, depression, stress, and pressure to achieve. In the first study, although statistically significant moderating effects were found for some of the individual difference constructs, they were not considered to be of practical importance in light of the large sample size. Regarding the second study, preliminary results from the first time wave indicated that there were no differences between students from the high-ability and mixed-ability schools in depression or stress. However, students from the high-ability environment reported worse relationships with parents and more pressure from parents to perform well at school. In the first study, results suggest that in Australia the BFLPE is reasonably consistent and generalises across the specific student characteristics examined. Preliminary results from the second study suggest that parental relationships are an important avenue to pursue in BFLPE research and in future intervention strategies.

Keywords: big-fish-little-pond effect, self-concept, Australia, meta-cognition, motivational orientations

Islands in the stream and streams in the island: Ability streaming and the big-fish-little-pond effect in Singapore

LIEM, G. (University of Sydney), MCINERNEY, D. (Hong Kong Institute of Education), YEUNG, A. (National Institute of Education, Singapore)

The study aimed to examine: (1) the big-fish-little-pond effect (BFLPE) as a consequence of ability-streamed classes (high-ability, middle-ability, and low-ability streams – a system-wide educational practice in Singapore) on academic self-concepts (ASC) in English and math; (2) the BFLPE in the contexts of gender and ethnicity; and (3) the role of student differences in motivational goals, academic engagement dimensions, and basic value orientations in moderating the BFLPE. The participants were 4,949 lower and middle secondary students from 11 public schools in Singapore (46% girls; mean age = 13.95). English and math self-concepts were measured by the Self-

Description Questionnaire-II (SDQ-II; Marsh, 1992). Students' Primary School Leaving Examination scores in English and math were used to construct indicators of individual student abilities and context-average achievements in the two subjects. Other established instruments with strong cross-cultural validity evidence were used to measure motivational goals, engagement dimensions, and values. Multilevel modeling analyses were performed using MLwiN 2.13 to address the study objectives. Consistent with the BFLPE and controlling for individual student ability, placement in a high-ability stream led to lower ASCs and placement in a low-ability stream led to higher ASCs. As expected, in an educational context that implements a nationally similar ability-streaming practice across its secondary schools, stream-average achievement effects on ASCs overshadowed those of the school-average achievements. Consistent with prior studies, interaction effects between the BFLPE and motivational goals, learning engagement dimensions, and value orientations were generally small or not statistically significant, and did not protect students against the BFLPE. There was no evidence that students systematically compared their achievements with those in their respective streams who are of the same gender or ethnicity. Consistent with the BFLPE, differentially significant effects on ASCs are associated with placement of students in low-ability and high-ability streams. These effects were largely consistent on students' English and math self-concepts. The BFLPE also generalizes well across students with different levels of motivational goals, learning engagement, and basic value orientations. There was no evidence for the BFLPE specific to the contexts of gender and ethnicity.

Keywords: the big-fish-little-pond effect, ability-streamed classes, Singapore, gender, motivational goals

Upward social comparisons: Angel or devil? On the opposite effects of forced and deliberate comparisons in the context of the BFLPE

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It is generally assumed that forced upward comparisons with classmates play a causal role in the BFLPE. At the same time, studies on role models substantiate the importance of deliberate upward comparisons as sources of motivation with positive effects on self-efficacy feelings and achievement. The first aim of this research is to examine the respective effects of these two basic types of social comparisons on the BFLPE and academic performances. Our second objective is to explore the motivational dynamics (based on achievement goal theory) possibly associated with deliberate upward comparisons that had been largely overlooked in theory and research on the BFLPE. A distinction is made between two types of social comparison: How students compare with most others around them under the pressure of the environment (forced comparison) and with whom they prefer to compare in this environment (deliberate comparison). Multilevel modeling analyses on French data were performed using HLM 6. As expected from research on the BFLPE, social comparison with the entire class mediated this (contrast) effect, indicating that it is indeed based on forced upward comparisons. As expected from research focusing specifically on social comparison processes, our data also show that deliberate upward comparison—a common practice in class—is driven by a desire to learn, and has beneficial (assimilative) effects on both academic self-concept and performances. Beyond the relatively uncontrollable social comparisons underlying the BFLPE, students exercise considerable choice over the target with which they compare themselves, mostly upward comparison targets with positive effects on self-perceived ability and behavior. As suggested by Wheeler et Suls (2005): "Probably every social comparison creates both the pull of assimilation and the push of contrast. Which process predominates depends on the person's degree of freedom and flexibility to make strategic comparisons." The present findings also contribute to the debate about the practical implications of the BFLPE. Although this effect may lead to the conclusion that upward social comparisons should be discouraged, our data teach us that

this conclusion does not apply to those in which students engage deliberately.

Keywords: *the big-fish-little-pond effect, motivation, self-efficacy, performance, achievement goal theory*

Why self-Concept matters and examples from bullying, peer support, reading, and mathematics research

Craven, R. (Centre for Educational Research, University of Western, Sydney)

There is a revolution sweeping psychology that emphasizes a positive psychology and focuses on how healthy, normal, and exceptional individuals can get the most out of life. Self-concept has been established as one of the most important constructs in of itself in the social sciences and as fundamental to psychological wellbeing. Self-concept is one of the most important constructs in education and as such many educational policies around the world advocate the development of positive self-concepts as an important outcome of schooling. Self-concept has also been demonstrated to be an important mediating factor that facilitates the attainment of other desirable psychological, behavioural and educational outcomes that underpin human potential. For example, a body of rigorous international research has demonstrated that self-concept shares a reciprocal, mutually reinforcing, causal relation with achievement and other desirable educational outcomes (see Marsh & Craven, 2005; 2006 for an overview). Yet the implications of these recent advances for effective educational interventions have not been fully elucidated. My thesis is that effective educational interventions need to include the enhancement of relevant self-concepts alongside the content, skills, and strategies delivered in intervention programs. The primary purpose of this presentation is to identify the centrality and implications of the self-concept construct for the development, implementation, and evaluation of effective educational interventions. The study showed, firstly, an overview of recent advances in self-concept theory and research is presented. Secondly, findings from example self-concept research studies in bullying, peer support,

reading, and mathematics are presented to identify best practice and important directions in research and development in these fields and to demonstrate the pervasive significance of the self-concept construct for multiple educational interventions. Finally, based on a synthesis of the findings, the implications of this body of research for developing, implementing, and evaluating effective educational interventions are discussed.

Keywords: positive psychology, Self-concept, psychological wellbeing, educational interventions, bullying

Both sides of the coin: consequences of constructive leadership and antecedents of destructive leadership

Chair(s): ADRIASOLA, E. (UWA Business School/ The University of Western Australia)

Discussant(s): DAY, D. (The University of Western Australia)

Five leading researchers from three different countries (Greece, Netherlands, Australia) come together to provide an overview on current leadership research. Two sides of the coin are tackled here starting with four papers exploring consequences of constructive leadership (transformational leadership, ethical leadership, leader-member exchange) and exploring different mediators and moderators for these relationships. However, leadership is not always constructive; the symposium therefore closes with an exploration of antecedents of destructive leadership (laissez-faire and abusive supervision). The first set of papers examines outcomes that may help to explain the “black box” between constructive leadership and performance. The first paper presents a cross-cultural study (including seven countries) which examines the mediating roles of flow and family-work conflict in the relationship between leader-member exchange and career success. The second paper provides further explanation for the relationship between transformational leadership and self-concordance by first exploring the leaders’ behaviours associated to the goal setting and the attributes of these set goals and second, by applying the goal hierarchy approach to the self-concordance construct. The third paper presents two multi-source studies looking at the relationship between ethical leadership and follower organizational citizenship behaviours and one contextual factor moderating this relationship: job autonomy. The fourth paper – closing the constructive leadership section – explores the effect of transformational leadership on transfer of training by combining both the theory of

planned behaviour and self-determination theory; it reports how the paths through attitudes, subjective norms, perceived control and autonomous motivation further explain this type of leaders' effect on transfer of training over and above supervisor's support and training climate. Destructive leadership is explored in the last paper presented in this symposium, which identifies the direct and indirect effects of dispositional antecedents (neuroticism, agreeableness and conscientiousness) for laissez-fair leadership and abusive supervision. Furthermore, this paper reports the socio-cognitive mediating effects of leader self-efficacy, affective motivation to lead and control appraisals. The discussant is one of the top leadership researchers currently in the world. He will draw together the themes and implications from the symposium. Overall, this symposium presents strong theoretical and empirical contributions to our understanding of both constructive and destructive leadership.

The mediating role of flow and family-work conflict in the relation between leader-member exchanges (LMX) and career outcomes

EPITROPAKI, O. (Alba Graduate Business School)

The role of Leader-Member Exchanges (LMX) for employee subjective and objective career success has been highlighted by previous studies (e.g., Erdogan et al., 2004; Seibert et al., 2001). The present cross-cultural study offers additional insights by exploring the role of employee perceptions of flow and family-work conflict in the relation between LMX and career outcomes. Flow is a state of consciousness where people become totally immersed in an activity and enjoy it immensely. When flow is applied to the work settings it is defined as "a short-term peak experience at work that is characterized by absorption, work enjoyment and intrinsic work motivation (Bakker, 2005, p.27). Employees who enjoy their work and feel happy tend to make a more positive judgment about the quality of their working life, be more creative and show more initiative at work. We therefore suggest that flow will be an important predictor for employee career outcomes, a relation that has not been

explored by previous studies, and that it will further mediate the relationship between LMX and career success. We also explored the role of family-work conflict in the relation between LMX and career outcomes. Family-work conflict (FWC) refers to a situation in which role pressures at home interfere with functioning at work (Greenhaus & Beutell, 1985). Few prior studies (e.g., Nikadrou et al., 2008) have explored the relation of FWC and career success and have shown FWC to be a significant predictor for career outcomes. Our sample consists of 588 supervisor-employee pairs from seven different countries (UK, Netherlands, Germany, Italy, Greece, Sweden and Poland) employed in the ICT sector. Structural equation modelling analyses have shown employee-rated LMX to be a significant predictor of subjective career success as well as one aspect of objective career success, i.e., bonuses and earnings beyond base salary. Supervisor-rated LMX was a significant predictor for all objective career outcomes. Our results further suggested that flow mediated the relationship between employee-rated LMX and subjective career outcomes, whereas FWC mediated the relationship between supervisor-rated LMX and objective career outcomes. Furthermore, the results were found to be generalizable among countries.

Keywords: leader-member exchange, flow, family-work conflict, career outcomes

Leadership's effect on motivation: understanding the mechanisms through which transformational leaders affect self-concordance

ADRIASOLA, E. (UWA Business School/ The University of Western Australia)

Motivation continues to hold the attention of much of the research done in industrial-organizational Psychology as it remains as one of the most decisive factors influencing performance. It is generally recognised that leaders play a key role in affecting their followers' work motivation; however, there are still gaps in our knowledge about the processes and mechanisms by which this occurs. Zaccaro and colleagues (2008) proposed that leaders enhance an individual's work clarity and

commitment, which in turn facilitates psychological conditions for consequent motivational processes and states. In other words, leaders motivate their followers by clearly specifying the tasks, the goals, the expected performance standards, and the available resources (Bass & Bass, 2008; Conger, 1999; Zaccaro, et al., 2008), thus allowing a clear and specific goal setting process (Drafke, 2006; Foster, 2000; Locke & Latham, 1990). In addition, transformational leaders affect their followers' goal commitment by promoting self-concordance (Bass & Riggio, 2006; Shamir, House, & Arthur, 1993; Zaccaro, et al., 2008). Bono and Judge (2003) reported a pioneering study investigating the effects of transformational leaders on self-concordance at work. They contributed to the understanding of the motivational effect of transformational leadership by providing evidence that the behaviours of these leaders influenced employee's self-concordance. However, their conflicting findings on the nature of motives prompted by transformational leaders and, the inconsistent results on the mediating effect of self-concordance on the relationship between transformational leadership and performance, suggests that the relationship is more complex than originally anticipated. Thus, in this paper I will provide preliminary data to further understand how this relationship works. More specifically I will first present qualitative data that explores the relationship between self-concordance and the attributes of goals set by transformational leaders and the leaders' behaviours associated with goal-setting. Second, I will develop the construct of self-concordance beyond simply autonomous/controlled motives by approaching it from a goal hierarchy perspective and explore how this theoretical development helps to explain the leader-self-concordance relationship. Finally, I will present preliminary quantitative results from a sample of teachers and engineers testing two potential neutralizers of transformational leadership on self-concordance, namely, vocational centrality and leader-member exchange.

Keywords: motivation, performance, goal setting, transformational leadership, self-concordance

How and when does the ethical behavior of leaders affect follower organizational citizenship behavior?

DEN HARTOG, D. (Amsterdam Business School/
Universiteit van Amsterdam)

This paper presents two multi-source studies addressing the relationship between ethical leadership and follower organizational citizenship behavior (OCB). Based on social learning and social exchange theory, we propose several reasons why ethical leader behaviour is likely to positively relate to follower OCB. In two related studies, we first test this relationship then try to develop more detailed insight into when this relationship holds. We developed and validated a measure of overall ethical leadership that is composed of seven different ethical leader behavior scales (fairness, integrity, ethical guidance, people oriented, power sharing, role clarification, and concern for sustainability) and in the first study among supervisor-employee dyads, we show how both overall ethical leadership and these different ethical leader behaviours (subordinate rated) relate to different forms of OCB (supervisor rated). Overall, we find low but positive relationships and fairness and power sharing were especially relevant in relation to OCB. Next, we ask when the relationship between ethical leadership and OCB occurs. We propose that employees are more likely to need the ethical guidance of leaders in context that allow them to choose alternative ways to act (i.e. high autonomy contexts). Thus, in the second study we investigated the moderating role of job autonomy in the relationships between overall ethical leadership (subordinate rated) and different forms of OCB (supervisor rated). In line with expectations, a study of supervisor-follower dyads demonstrated that perceived job autonomy moderated the relationships of ethical leadership with OCB such that this relationship is positive when job autonomy is high, but not significant when job autonomy is low. Overall, our findings indicate ethical leadership relates positively to follower OCB, but that moderators such as autonomy do affect this relationship and that we need to know more about the role of the context in ethical leadership.

Keywords: *ethical leadership, follower organizational citizenship behavior, positive relationships, fairness, power sharing*

The role of transformational leadership in the transfer of training

PATAH, S. (UWA Business School/ The University of Western Australia)

Transfer of training research has identified a range of factors that affect the extent to which trainees perform the trained skills and knowledge at the workplace (see Cheng & Hampson, 2008; Colquitt, LePine & Noe, 2000). These factors are related to training design (e.g. training usefulness), individual characteristics (e.g. personality; motivation; ability), job variables (e.g. job involvement; organizational commitment); work environment of the employees (e.g. transfer climate; supervisory support); and motivation (e.g. motivation to learn; motivation to transfer). Despite this wide-ranging literature, very little research has examined the role of the leader in the transfer process. Surprisingly, the only research that has looked directly at leadership has focused solely on supervisors' support (e.g. Cromnell & Kolb, 2004). However, in the leadership literature, the positive effect of transformational leadership on followers' job attitudes and behaviour has been substantially documented (e.g. Bono & Judges, 2003). Thus, we propose that transformational leadership will influence the trainees' intention and willingness to transfer learned skills back to workplace over and above the effect of supervisor support. We develop a model that incorporates two widely-supported social psychological theories of behaviour change: Theory of Planned Behaviour (TPB; Ajzen, 1991) and self-determination theory (SDT; Deci & Ryan, 2000). We hypothesize that transformational leadership will influence trainees' attitudes, subjective norms, perceived control, and autonomous motivation to transfer the training which will affect their transfer intentions and behaviour. It is also hypothesized that the four components of transformational leadership, namely individualized consideration, idealized influence, inspirational motivation, and intellectual stimulation will have differential effects on these variables as well as on existing

training transfer variables such as supervisor support and training climate. To date, no study has incorporated the theories of transformational leadership, TPB and SDT in a model of training transfer. The hypothesized model will be tested on a sample of 250 professional and managerial employees undertaking a series of leadership training programmes and preliminary results will be discussed.

Keywords: *transfer of training, transformational leadership, intention, theory of planned behaviour, self determination theory*

The dispositional antecedents and socio-cognitive mediators of abusive supervision and laissez-faire leadership

RAFFERTY, A. (Australian School of Business/ The University of New South Wales)

A growing body of research is exploring the role of dispositional antecedents of constructive leadership (e.g., Lim & Ployhart, 2004; Walumba & Schaubroeck, 2009). For example, individuals high in positive affectivity are more likely to engage in transformational leadership behaviours. In contrast, extraversion has been demonstrated to provide a clear benefit to leaders who also possess the ability to accurately recognize emotions (Rubin, Munz, & Bommer, 2005). More complex relationships have also been demonstrated with authors such as Ng, Ang, and Chan (2008) reporting of a sample of military recruits from Singapore, that leader self-efficacy mediates relationships between three leader personality traits and leader effectiveness. Specifically, leader self-efficacy mediated the effects for neuroticism and conscientiousness on leader effectiveness when leaders had high rather than low job autonomy. Although these studies increased our understanding of the dispositional characteristics that are likely to facilitate constructive leadership, we know very little about dispositional antecedents associated with destructive leadership such as abusive supervision (Tepper, 2000), or laissez-faire leadership (Skogstad, Einarsen, Torsheim, Schanke Aasland, & Hetland, 2007). By taking a dispositional approach, we closely examine the personality configuration of leaders who

engage in these types of behaviours. In this study, we developed and empirically tested conceptual hypotheses proposing dispositional antecedents and socio-cognitive mediators of abusive supervision and laissez-faire leadership. We argue that leader neuroticism, agreeableness, and conscientiousness have both direct and indirect relationships with abusive supervision and laissez-faire leadership. We identify leader self-efficacy, affective motivation to lead, and control appraisals as mediators linking leader personality and leader behavior. Data were collected from 400 supervisor-subordinate dyads from a wide range of business sectors in the Philippines. Results of structural equation modelling suggested that leader agreeableness has both direct and indirect relationships with the two types of destructive leadership. In contrast, leader conscientiousness and neuroticism displayed indirect relationships with abusive supervision through leader self-efficacy and perceptions of control. Our paper ends with a discussion of the strengths and limitations of our theoretical approaches and empirical findings.

Keywords: destructive leadership, abusive supervision, laissez-faire leadership, personality

Broadening perspectives on student motivation, learning and wellbeing

Chair(s): WATT, H. (Monash University)

Discussant(s): MARTIN, A. (University of Sydney)

The proposal offers broadened perspectives on student motivation, making links beyond achievement scores which are commonly studied in existing research, to encompass important broader learning and wellbeing outcomes. The key objectives of the symposium are to establish how different profiles of Australian student learning goals relate to their achievement, coping, and wellbeing (paper 1); the relevance of cultural dimensions in Indonesia of religiosity and ethnicity to university students' motivations, attribution styles, self-efficacy and achievement (paper 2); intra- and extra-individual frame of reference effects in the micro-development of German students' general and domain-specific self-concept in the transition to secondary school (paper 3); and the effects of career outcome self-efficacy on Canadian young adult men's and women's academic motivation and STM (science, technology or mathematics) career aspirations (paper 4). A diversity of cultural contexts is included, with samples come from secondary students in Australia and Germany, and university students in Indonesia and Canada. Different social-cognitive motivation theories are represented: goal theory, attribution theory, self-concept, and self-efficacy theories. Sophisticated methodological approaches and analyses provide robust empirical evidence for the interpretations and conclusions made by the authors, including structural equation modeling, cluster analyses, latent growth curve modeling, and MANOVA. Following each individual presentation, our Discussant is a senior motivation researcher and Professor, well-known for his influential and pioneering work in the field. His breadth of background and depth of expertise across the motivation perspectives and methodologies included, brings an especially dimension to his critique, insights, and

integration across the presentations. He will conclude with recommendations for future research in this area, and stimulate general audience questions and discussion to close.

Combination of learning goals' effect on learning strategies and coping skills

TOH, Y. (Monash University)

This study examines the 2x2 Learning Goals, and Work Avoidance goal, in relation to learning strategies and coping behaviour. It looks at how each learning goal (and their combinations) affect students' academic achievement and psychological wellbeing. Four path models and MANOVA results are presented to map out the relationships among variables. Results were derived from a survey with 341 Grade 7-12 students from 2 Melbourne high schools. These established scales were administered: 2x2 Goal Questionnaire, Learning Process Questionnaire, Brief-COPE, and DASS-21. Path model 1 supported a fit between learning goals, learning strategies, effort, and the academic achievement outcome variable. Deep learning and effort were found to partially mediate the relationship between learning goals and achievement. Path model 2 supported a fit between learning goals, coping behaviours, and the psychological wellbeing outcome variable. Certain coping behaviours partially mediated between learning goals and psychological wellbeing. In contrast, Path models 3 and 4 used cluster membership based on learning goal profiles, to predict outcomes. Results differed when learning goals were combined, as opposed to each single learning goal as a predictor. MANOVA compared between-cluster differences. Results suggest that when learning goals were predictor variables on their own, the Mastery Approach goal was most adaptive, compared to the other four goals, for both academic achievement and coping. This goal related significantly to deep learning and effort, which in turn, led to better academic achievement. However, a different picture emerged when learning goals were combined. The cluster group which had moderate scores for all the 2x2 goals and had the highest academic achievement compared to the other groups

(High-Performance, High-Mastery, All-Goals-Low, All-Goals-High). It seems that being moderately multiply engaged by several goals is therefore more adaptive than any single learning goal in isolation. A somewhat similar pattern could be seen in terms of the learning goals' relations to coping behaviour and psychological wellbeing. Once again, the group with moderate scores for all 2x2 goals indicated better psychological wellbeing. In conclusion, there appears to be a common thread that runs along learning academically, and coping with stress.

Keywords: goals, work avoidance goal, learning strategies, coping behaviour

The effect of students' attribution on motivation and academic performance: a study among native and Chinese Indonesian university students

SUTANTOPUTRI, N. (Monash University)

This study focused on attribution and motivation among Indonesian university students. Previous studies have found that one's attribution can be influenced by cultural background, and that there are differences in motivation among ethnicities. This research explored the possible connections among attribution, motivation, and cultural factors (ethnicity, religiosity, gender) with Indonesian university students. In total 443 students participated (155 male, 287 female), from each a public and a private university, because racial issues permeate the educational setting: mostly native Indonesians study at public universities and mostly Chinese Indonesians at private universities. Three dimensions of students' attribution were included: locus of control, stability, and controllability. The controllability dimension further differentiated between personal control and external control. Measured motivations included achievement goals (learning goals, performance-approach and avoidance goals), work-avoidance motivation, and learned helplessness. Implicit theories of intelligence and self-efficacy were also measured. The results show some interesting relationships between students' attribution and motivation; some supported hypotheses and others gave another interpretation. Students with internal, stable,

controllable attributions were found to adopt learning goals but not performance approach goals, and to have high self-efficacy. Students with external, unstable, uncontrollable (external) attributions were linked with performance-avoidance goals and learned helplessness. Internal, unstable, externally controlled attributions related to work-avoidance motivation. It was also found that high religiosity was linked with external, stable, controllable (personal) attributions. There were not any differences between male and female participants regarding their locus of control, stability, personal and external control attributions, or religiosity. This study adds more knowledge to the study of relationships between attribution, related motivation variables, and cultural setting, within the context of the Indonesian higher education sector.

Keywords: *attribution, motivation, cultural factors, self-efficacy*

Implications of ability grouping for development in general and domain-specific self-concepts of ability after the transition to secondary education

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WATERMANN, R. (University of Goettingen),
GRUBE, D. (University of Goettingen)

In Germany, there is usually a tracked system of secondary school after Grade 4. Some high-track schools ("Gymnasium") also offer special classes with a certain profile e.g. bilingual or mathematics. In these special classes, often achievement is even higher than in standard classes at the same school. It has been shown that attending classes or schools where class-average achievement is higher, leads to lower self-concepts after controlling for individual achievement (Big-Fish-Little-Pond-Effect; Marsh, 1987). This might be problematic for students, because academic self-concept relates to wellbeing, as well as academic achievement (Marsh et al., 2006). However, it has not yet been examined how the development of self-concept proceeds exactly in the first half-year after changing to a high-track school, and whether there are bigger changes in general or domain-specific self-concept. Our longitudinal study examined

whether students assigned to different school and class types (comprehensive school, standard Gymnasium classes, Gymnasium classes with a mathematics, science or bilingual profile) show differential developmental trajectories in general self-concept of ability and domain-specific self-concepts in mathematics and German, after the transition to secondary education. All participants were Grade 5 students who had received a Gymnasium recommendation: 139 were attending a Gymnasium with three standard classes and two classes with special profiles, and 99 were attending a comprehensive (non-tracked) school. General self-concept of ability was measured at five time-points, and domain-specific self-concepts at three time-points, in participants' first semester of secondary education following the school transition. Latent growth modelling analyses revealed that students in high-ability classes with special profiles showed a decrease in general self-concept of ability, but not in mathematics or German self-concept. Against the background of these results, the influence of basking-in-reflected-glory-effects is proposed to offset predicted BFLPE effects.

Keywords: *secondary education transition, general self-concept, domain-specific self-concept*

Academic motivation in post-secondary students: effects of career outcome expectations and field of study

DOMENE, J. (University of New Brunswick),
WOITOWICZ, L. (Trinity Western University)

Social cognitive theory proposes that human agency and performance is affected by several mental processes, including self-efficacy and expectations for a successful outcome. Despite these conceptual links, the fact that academic motivation is future-oriented, and the literature establishing the role of self-efficacy in motivation, less attention has been paid to the role of outcome expectations than efficacy in determining students' academic motivation. This study was an examination of the effects of general career outcome expectations (COE) on post-secondary students' intrinsic and extrinsic academic motivation. We were particularly interested in determining whether these effects differed according to gender, and

whether or not the student aspired to a science, technology or math (STM) career path. A quasi-experimental design was utilized, with data collected from an online survey. Established measures of academic motivation and COE were used and STM aspirations coded from self-reports of students' anticipated future occupation. Separate ANOVAs were conducted with intrinsic and extrinsic as the dependent variable, and career expectation group (high, mid, low), gender (male, female), and STM aspiration (yes, no) as independent variables. For intrinsic motivation, significant differences were found for COE and STM. Interaction effects were not significant. Posthoc tests revealed that students with high COE, and students with STM aspirations, were more motivated than their peers. For extrinsic motivation, significant effects emerged for COE, STM, and the gender*STM interaction. Specifically, people with high COE have higher extrinsic motivation levels, and, although women in the STM and non-STM groups are similar, males with non-STM aspirations have lower extrinsic motivation than their STM counterparts. Hypotheses were partially supported by the results, and generally confirmed the tenets of social cognitive theory regarding the influence of outcome expectations on academic motivation. The unexpected absence of interactions between STM and COE may be due to the use of a general, rather than discipline-specific, measure of expectations. Forming the IVs from pre-existing characteristics rather than random assignment also limits claims of causality. Nevertheless, these results suggest that improving students' expectations of a successful career outcome may benefit their motivation for academics. Specific strategies for doing so will be discussed.

Keywords: social cognitive theory, academic motivation, career outcomes, gender

Building trust across cultures: Challenges and opportunities for organizational research and practice

Chair(s): KOEHLER, T. (The University of Melbourne)

Discussant(s): HARTOG, D. D. (Amsterdam Business School)

Previous research has identified various challenges for trust building across cultures including, but not limited to, lack of shared understanding (Cramton, 2001), increased affective and cognitive conflict (Hinds & Bailey, 2003), and different use and interpretation of English (Berry, Carbaugh, Innreiter-Moser, Nurmikari-Berry, & Oetsch, 2009). However, we know far less about how trust can be built effectively across cultures and how the actual trust-building process takes shape. Accordingly, the aim of the current symposium is an in depth exploration of trust building and maintenance across cultures. Key learning objectives from the presentations include: 1) understanding the dynamic process of trust building across cultures; 2) exploring the influence of cultural differences on trust building by looking at culture at an in-depth level, i.e., contrasting different 'species' of collectivism across cultures, capturing different cultural identities and the role they play in the trust building process, describing cultural differences regarding the underlying meaning of trust-related concepts and their effect on trust formation across cultures; and 3) capturing the effect of context specific variables such as the asymmetric nature of hierarchical relationships in manager/subordination relationships for trust building. Special attention should also be given to the diversity in methodological approaches, samples, and cultural background of the researchers in this symposium. The papers in the current symposium use survey research, participant observation, semi-structured interviews, and business simulation to gain insight into trust building across cultures.

Samples come from the USA, Germany, Finland, Turkey, China, and 18 other countries. The researchers themselves are very diverse, coming from countries such as Australia, Spain, Austria, Singapore, Turkey, the Netherlands, the UK, and the USA. Given this diversity, the current symposium provides a great representation of trust building processes around the world. Implications from the research will be discussed by an eminent scholar in the field of cross-cultural management who has published extensively on challenges to trust across cultures. The discussant will critique the papers and provide an outlook on opportunities for future research.

Towards a theory of trust and culture: Dynamic processes of trust building through cultural identities

GILLESPIE, N. (The University of Queensland),
CHAO, G. T. (Michigan State University), DIETZ, G.
(Durham Business School)

Trust-building and relationship maintenance are critical processes for sustainable organizational success, particularly in complex environments characterized by high ambiguity, uncertainty, and a wide diversity of potential trust partners (Johnson & Cullen, 2002). Yet developing and maintaining trust between different 'cultures' is a formidable challenge. In this conceptual paper, we present a theory toward understanding how a person's cultural identities affect trust building. Recent treatments of culture extend this construct beyond definitions of national culture. Chao and Moon (2005) present a meta-theory that redefines the usual nation-level interpretation of culture to include associative, demographic, and geographic factors. When culture is defined by shared values and behaviors among a specific group of people, multiple cultural identities emerge. Associative cultural identities draw on different groups or social identities such as professions, religions, or organizations. Demographic cultural identities are based on physical characteristics of group members such as gender, race, or age. Finally, geographic cultural identities are shaped by natural or man-made environments such as rural/urban, coastal/in-land, or

temperate/tropical distinctions. Multiple cultural identities form a cultural mosaic within individuals, offering a variety of values and behaviors that can facilitate or impede trust-building and relationship maintenance. We draw on literature from diverse work groups (cf. Harrison, Price, Gavin and Florey; 2002), to describe a process whereby trust relationships are initially influenced by surface-level cultural identities and later progress to deep-level forms of culture. It was found that surface-level diversity differences are obvious features that separate groups (e.g., race, gender, and age) and constitute demographic cultural identities. They influence culturally-based behaviors or "strategies of action" that set initial conditions for trust building (Swidler, 1986). Subsequent interactions can rise above superficial differences, moving trust partners away from surface-level differences to focus on deep-level forms of diversity. These forms may be psychological and include individual differences such as personality traits; they may also be value-based and influenced by associative cultural identities. Thus, time is viewed as a medium where different cultural identities are salient at different developmental stages of trust building and maintenance. Furthermore, situations that call for trust repair (Gillespie & Dietz, 2009) are theorized to benefit from shared cultural identities between trust partners.

Keywords: trust-building, relationship maintenance, organizational success, surface-level differences, cultural identities

The effect of OCB on managerial trustworthy behavior: The roles of manager trust in subordinates and collectivism

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We take a social exchange theory perspective to conceptualize subordinates' organizational citizenship behavior (OCB) as an antecedent of managerial trustworthy behavior and examine how managerial trust in subordinates mediates this relationship. We also investigate to which extent this mediation is moderated by the level of collectivism prevalent in a society. Data were collected from 741 managers and 2111 subordinates in 18 countries representing all major cultural regions of the world. Using robust data analytical techniques, we show that managerial trust in subordinates partially mediates the relationship between subordinates' OCB and managerial trustworthy behavior across the different countries studied. We also find that manager trust in subordinates will only mediate the relationship between subordinates' OCB and managerial trustworthy behavior when collectivism is low but not when it is high. Our contributions to existing research are threefold: First, we extend the literature on manager-subordinate trust by explicitly focusing on managerial trust perceptions and conceptualizing the transition between behaviors and affective states in manager-subordinate exchange relationships. Specifically, we investigate how subordinates' OCB relate to managerial trustworthy behavior and how managerial trust in subordinates as an affective state (McAllister, 1995) mediates this relationship. In doing so, we develop and validate a comprehensive scale of managerial trustworthy behavior based on the work of Whitener et al. (1998). Second, we contribute to the literature on OCB by explicitly conceptualizing OCB as an antecedent of attitudinal as opposed to more behavioral performance outcomes. Third, we test our conceptual model across a wide range of cultures that represent the different regions of the world and examine the role of collectivism as a moderating factor, testing the boundary

conditions of manager-subordinate relationships across cultures.

Keywords: *social exchange theory, subordinates, organizational citizenship behavior, managerial trust, managerial trustworthy behaviour*

Why do I trust my coworkers? Comparison of factors of trustworthiness among peers across Turkey and China

TAN, H. H. (Singapore Management University)

Dyadic trust research including the seminal Mayer, Davis and Schoorman (1995) model has been applied to contexts outside North America without careful understanding of the distribution of social practices and everyday situations in such contexts (Wasti, Tan, Brower, & Onder, 2007). This study examines culture-specific workways for understanding the development of peer trust in organizations in collectivistic cultures. Workways refer to the pattern of workplace beliefs, mental models and practices about what is true, good and efficient within the domain of work (Sanchez-Burks & Lee, 2007). Semi-structured interviews were conducted with 22 Turkish and 29 Chinese employees working for a variety of organizations located in Istanbul, Turkey and ShenZhen, China. The interviews suggested that in collectivistic cultures, where the professional/personal dichotomy is less clear (Gelfand, Leslie, & Fehr, 2008) the multiplexity of work relations is essential for understanding the foundations of interpersonal trust. Multiplexity refers to the extent to which affective and instrumental concerns are shared within the same relationship (e.g., coworker and friend; Morris, Podolny, & Ariel, 2000). In the Turkish sample, trust building appeared to be holistic in terms of seeking to share personal information, time and space, thereby expanding the bandwidth of trust. In this context, much reference was given to the benevolence as well as the integrity of the trustee as exhibited within and outside of the work context. This is in contrast to the Chinese sample where common background (in terms of guanxi and experience) and values emerged as an important antecedent. The guanxi element plays a big role in trust building for peers. Also, out of the three big categories of trust antecedents (ability, benevolence, and

integrity), benevolence has the lowest frequency for the Chinese sample. Furthermore, while the ability of the peer emerged as a salient trust antecedent in the Chinese sample, this was not the case for the Turkish sample. Such differences highlight the importance of differentiating between species of collectivism (Morris, Podolny, & Sullivan, 2008) as well as incorporating dimensions such as performance orientation (House, Hanges, Javidan, Dorfman, & Gupta, 2004) to further analyses coworker relations.

Keywords: interpersonal trust, peers, collectivistic cultures, culture-specific workways, performance orientation

Cultural differences in concepts that create trust

KOEHLER, T. (The University of Melbourne)

One of the most important influence factors for trust development is experience. Trust develops as a result of the trustor experiencing competent, reliable, and well-intentioned behavior on the part of the trustee (Mayer, Davis, & Schoorman, 1995). However, what happens when interpretation of the same behavior differs between the trustor and the trustee due to cultural differences? Differences in cultural background affect how we interpret meaning of a given message (e.g., Carbaugh, 1999; Philipsen et al., 2005) and how we interpret behaviors and attribute cause (Kim, 2005). This can negatively impact team member trust (Bradach & Eccles, 1989). The current study observed internationally distributed student teams from three countries (USA, Finland, and Germany) during two international collaborations. Findings from this qualitative study showed that the same behavior can lead to very different attributions about the actor's intentions depending on underlying cultural norms. For example, differences exist in what honesty means and how it is expressed in the three different cultures. The data suggests that honesty for Finns means that one means and does exactly what one said. What one said one would do becomes a promise that other Finns rely on. To Germans, honesty is about candidness and sincerity. Saying exactly what one means and meaning what one says are important to show

respect for others by not deceiving them. American students highlighted the importance of open communication for honesty. However, to be polite Americans will often describe things as nicer than they really are, especially when they have to convey a negative message. Furthermore, things one said one would do are not always followed by action. Integrity is one of the major factors for building trust (Mayer, Davis, & Schoorman, 1995). The fact that the same behavior can lead to attributions of integrity for one cultural group but not for another based on different cultural expectations makes trust building in multi-cultural teams difficult. The current study highlights the importance of nuances of cultural differences that offer deeper and more meaningful distinctions than commonly used dimensional systems of culture such as Hofstede's (1980) or Trompenaar's (1994).

Keywords: trust, experience, cultural differences, attributions, integrity

Career adaptability: Cross-cultural examination of a model and measure

Chair(s): SAVICKAS, M. (NE Ohio Universities College of Medicine)

Discussant(s): HOU, Z. (Beijing Normal University)

To assist individuals manage their working lives and encourage organizations to provide career coaching, vocational psychologists have recently formulated a new model of career adaptability as well as constructed measures and materials to increase adaptive readiness and resources. This work on career adaptability has been conducted by research teams in twelve countries. In this symposium, representatives of the international project will present for the first time the results of their work. The symposium will begin with a brief overview of the theory and taxonomy of career adaptability that they jointly formulated. Then, the symposiasts from five countries will each explain how they have contextualized the model of career adaptability to address cross-cultural issues and present the results of studies that empirically evaluate the model. A discussant will close the session by critically commenting on the papers. Participants should leave having accomplished five learning objectives: (1) understand the theory of career adaptability; (2) distinguish the dimensions of willingness, ability, and performance; (3) obtain and evaluate inventories that measure career adaptability; (4) examine empirical research on career adaptation; and, (5) appreciate cross-cultural differences in career adaptability. Career adaptability is a multidimensional construct that concerns individual differences in the willingness, competence, and performance of behaviors required to negotiate work transitions. The performance dimension concentrates on five principal types of coping behaviors that constitute adaptation: orientation, exploration, establishment, management, and disengagement. The willingness to engage in these coping behaviors constitutes the personality dimension in the model. Willingness to adapt is viewed as

compound psychological trait composed by facets of flexibility, proactivity, conscientiousness, and openness. The third dimension of the model is adapt-abilities. In comparison to the psychological trait of willingness to adapt, adapt-ability is a psychosocial competence, which is distinct from the behaviors that produce adaptation and its outcomes. Career adapt-abilities include concern, control, curiosity, confidence, collaboration, and cooperation. Together willingness and adapt-abilities shape an individual's readiness and resources for performing the behaviors need to cope with current and anticipated vocational development tasks, job transitions, and work traumas in their occupational roles that, to some degree large or small, alter their social integration.

Career adaptability in Iceland: Test of a model and measure

VILHJÁLMSDÓTTIR, G. G. (University of Iceland),
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The Icelandic economic system is undergoing a severe crisis that started in the fall of 2008. Unemployment has risen dramatically and this society of 320,000 inhabitants will have to adapt quickly to new working conditions. In this atmosphere the concept of career adaptability becomes essential. It has been defined as the individual's readiness and resources for coping with current and imminent changes in a career, such as in vocational development tasks, occupational transitions, and personal traumas. This presentation will explain how a new model of career adaptability has been refined to fit the Icelandic context. The presentation will include results from an empirical study that evaluates the model and its usefulness. The study was conducted in two steps. First the model of career adaptability was examined relative to its use in Iceland. This resulted in minor modifications of the model. Then, the Career Adapt-Abilities Inventory (CAAI) was translated into Icelandic and expanded to include additional items that are culturally-specific to Iceland. The CAAI measures the strength of the individual in adaptive tasks that

touch upon the five dimensions of career adaptability: concern, control, curiosity, co-operation and confidence. The new items did not create a further dimension of adaptability. Instead it added items to make each dimensions particularly relevant to individuals in Iceland. The first study to be reported dealt with the psychometric qualities and applicability of the CAAI in Iceland. The Icelandic version of the inventory was administered to a sample of 491 Icelandic youth (285 female and 206 male). The results indicated that the inventory had sound reliability and results of a factor analysis were satisfactory. The reliability estimates of the five scales ranged from $\alpha = .83$ to $.95$. Given this initial evidence of reliability and factor analysis, a second study is now being conducted to examine the inventories concurrent validity and its validity for use in career assessment with individuals. In this study the inventory will be administered to a sample of 3000 individuals ranging in age from 15 to 65 years (5 age groups). The results of the two studies will be discussed relative to cross-cultural soundness of the new model of career adaptability, its translation into a measure, and its usefulness in the career assessment of individuals and groups.

Keywords: *career adaptability, Iceland, Career Adapt-Abilities Inventory, economic system, career assessment*

Career adaptability in Portugal and Brazil: Test of a model and measure

DUARTE, M. E. (University of Lisbon), LASSANCE, M. C (University of Lisbon)

The theory of career construction and life-design counseling concentrates on three domains: personality, adaptability, and identity. Adaptability, in particular, must be considered from a cross-cultural perspective that is sensitive to context and the personal experience of individuals in diverse situations. Members of an international research team have jointly constructed a general model of career adaptability. Each member heads a national research team that is examining the validity and usefulness of the model in a particular country. This presentation aims to report the results of studies of career

adaptability in Portugal and in Brazil. The examination of career adaptability in Portugal and Brazil began with a conceptual evaluation of the construct in these two countries. The operational definitions of the construct were expanded to include behaviors specific to these countries. Then, the Career Adapt-Abilities Inventory (CAAI) was translated into Portuguese and expanded to include additional items that are culturally- specific to Portugal and Brazil, respectively. The CAAI measures the strength of the individual in adaptive tasks that touch upon the five dimensions of career adaptability: concern, control, curiosity, co-operation and confidence. The Portuguese and Brazilian adaptations were administered to different samples, including university students, unemployed adults, and high school pupils. The presentation and discussion of the results and its importance for career counseling illustrates this new way to "measure" adaptability. Some psychometric analyses suggest modification of the theoretical model of career adaptability and its application in different cultures and contexts. Implications for practice and intervention on the field of career construction are discussed.

Keywords: *career construction, career adaptability, Portugal, Brazil, Career Adapt-Abilities Inventory*

Career adaptability in Holland: Test of a model among the unemployed

VAN VIANEN, A. E. M. (University of Amsterdam), KOEN, J. (University of Amsterdam), KLEHE, U. C. (University of Amsterdam)

Unemployment can be a depressing and literally sickening experience (e.g., McKee Ryan, Song, Wanberg, & Kinicki, 2005). Most unemployed people will try to end this unfortunate state as soon as possible by searching for a new job. Reality shows, however, that the path towards reemployment is often long and does not necessarily bring a person closer to the final goal of finding a fitting job. The duration of unemployment depends on economic factors, but individual factors have been found to contribute as well (e.g., Kanfer, Wanberg, & Kantrowitz, 2001). In essence, people differ in their adaptive resources for managing transitions. That is,

they may have or lack the necessary concern, control, curiosity, and confidence for searching for and finding a new job (Savickas, 2005). Little is yet known about the precise role of people's career adaptability in the process of finding reemployment. In this study, we examined how four dimensions of career adaptability (concern, control, curiosity, and confidence) translate into people's job search strategies and the following (quality of) reemployment. In addition, given the importance of career adaptability for successful career transitions, research is warranted that investigates the determinants of career adaptability. In the context of (long-term) unemployment, it is particularly important to assess how people's career concern, including the setting and pursuing of career (i.e. reemployment) goals, can be influenced. A pervasive phenomenon that unemployed people face is the many rejections in response to their applications. Moreover, they are often obliged to participate in reemployment-related interventions that do not always suit their preferences and abilities. Hence, unemployed people often experience loss of control and autonomy, which may impair goal setting or undermine the quality of their goals (for example, a focus on extrinsic rather than intrinsic goals). Thus, we examined how people's perceptions of autonomy or control during a reemployment intervention impacted upon the setting and quality of their career goals.

Keywords: unemployment, career adaptability, reemployment, autonomy, career goals

Career adaptability in South Africa: Test of a model and measure

MAREE, K. (University of Pretoria)

A new social arrangement of work poses a series of questions and challenges that individuals who work in global economies must address. Life-design counselling is a concept that integrates the process of career construction and self-constructing with the unique factors that play a role in an individual's life at a specific time and in a specific context and describe vocational behaviour and its development. Career and self-construction are characterised by the intentional integration of

and the simultaneous focus on personality characteristics, developmental processes and individual stories and are therefore still related to the overall fitting of individual characteristics with possible careers. The framework for life designing is therefore structured to facilitate strategies that are life-long, holistic, contextual, and preventive. Against the framework explicated above, this presentation will report the results from three research projects dealing with model of career adaptability and the methods of life-design counselling in South Africa. Each study will use mixed methods of quantitative and qualitative research to describe and explore the meaning and measurement of career adaptability. The study will be a case report describing the impact of life-design counselling on an adolescent from a minority group who had passed Grade 12 and experienced a need for career counselling. The second study will examine the adaptability of Grade 11 students identified as potential leaders relative to gender and socio-economic level. The third study will examine the career adaptability needs of adolescents in a psychiatric institution. Each of the three studies is using a brief biographical questionnaire and the South African Career Adapt-Abilities Inventory (an Afrikaans version). Taken together, the results of the three studies will show the reliability and initial validity of the South African version of the Career Adapt-Abilities Inventory as well as its validity for use in diverse cultural contexts. The results will also be used to suggest modifications to the theoretical model of career adaptability and its cross-cultural utility.

Keywords: life-design counselling, career adaptability, South Africa, adolescents, career counselling

Career adaptability in France: Test of a model and measure

POUYAUD, J. (CNAM/INETOP), SOIDET, I. (CNAM/INETOP), VIGNOLI, E. (CNAM/INETOP), DOSNON, O. (CNAM/INETOP)

The research to be reported aimed to consider the validity and reliability of the five dimensions of the French version of the Career Adapt-abilities Inventory (named Cady in

French) with populations of senior high-school and college students. The study explored the construct validity of the Cady using factor analysis as well as its concurrent validity by examining links between the five adapting competencies described in the Career Adapt-Abilities Inventory and more classical dimensions related to students' adaptation to their current academic conditions. The four dimensions used to examine concurrent validity were satisfaction and adjustment to college, self efficacy beliefs, motivation, and anxiety in school context. Four scales are used simultaneously with the Career Adapt-Abilities Inventory: a French version of the Baker & Siryk's Student Adaptation to College Questionnaire (SACQ; 1984) in order to explore various facets (academic, social, personal adjustments and academic commitment) of students' adjustment to college. Motivation is approached with a French questionnaire (QMF-Forner, 2006) that explores three main dimensions: time perspective, fear of failure and locus of control. Perceived anxiety in school context is measured by the Future School and Career Anxiety Inventory (ANSSP-Mallet & Vignoli, 2005). High-school students' self-regulation is dealt with a self efficacy beliefs questionnaire about their capacities to control events that affect their lives. We present the principal components analysis of the items to determine how well the factor structure fits the theoretical model of five capacities. We will also present the principal links with other dimensions and specify the differences between career adaptation and school adaptation. In conclusion, we read these results in connection with life designing perspective, and try to explore how measures of adaptation could be used in a constructivist approach.

Keywords: career adaptability, career adapt-abilities inventory, motivation, anxiety, life-designing

Career anchors: Empirical evaluations of the concept and its applications

Chair(s): ARNOLD, J. (Loughborough University), GUEST, D. (Kings College London)

Discussant(s): GUNZ, H. (University of Toronto)

Ed Schein's long-established concept of career anchors and his method for assessing an individual's anchor(s) have for some years been commonly used tools in practical career development workshops and career planning exercises. Although the academic literature has not entirely ignored career anchors (see for example Feldman & Bolino, 2000; Schein, 1996), they have figured less in research than in practice. This leads to two learning objectives for this Symposium. First, participants will discover more about the validity or otherwise of the career anchor concept and measures. For example, do they adequately represent the key guiding values for all or nearly all people? Second, what work/career behaviours and attitudes, if any, are anchors related to? These questions matter, because the answers will clarify the usefulness (or not) of anchors as a practical tool, as well as specifying what refinements are needed. All four papers within the symposium include large-scale data. Collectively they address the construct validity, behavioural correlates, and demographic differences concerning career anchors, as well as the utility of seeking congruence between a person's anchor and their job. The data are collected from people in the United Kingdom, South Africa, Switzerland, and Germany. The four papers indicate that there is both good news and bad news concerning career anchors. Schein's typology seems to work reasonably well, but it does need adjustment at least for some groups. It is linked with other related career attitudes, and also importantly with behaviours. Anchor scores differ systematically between some demographic groups, but no group can be stereotyped in a way that justifies undifferentiated HR career policies in organizations. There does seem to be some

value in using anchors as a conceptual basis for matching people to jobs. These and other themes will be brought together by our Discussant, Professor Hugh Gunz from the University of Toronto. With his distinguished contributions to the careers literature, and insightful perspectives on it, he is unusually well-placed to draw out the practical and theoretical implications of the work presented in the Symposium. He will also offer constructive critique of the papers.

Career anchors of professional workers: extending Schein's framework

RODRIGUES, R. (Kings College London)

Schein's (1996) concept of career anchors has had a major influence on career theory and career management. This line of inquiry is particularly important in times of turbulence for workers, whose careers some consider to have become flexible (Cappelli, 1997) and boundaryless (Arthur, 1994). However, Schein's research is based on a limited sample of MBA students and it is not clear that his typology adequately captures the career experiences of other types of worker. In addition, his research has been more concerned with developing a typology of anchors than exploring their influence on people's career choices and attitudes. There is therefore a need to broaden the empirical analysis of career anchors and to study their correlates. This paper reports the findings of two studies conducted among professional workers in the UK. Study One replicates qualitative elements of Schein's methodology, capturing the career histories, goals and ambitions of 37 professionals. Study Two was a quantitative test of an amended measure of career anchors and an exploration of some of its key correlates drawing on a sample of 1,400 professionals. Our Study One findings suggest that Schein's typology needs to be adapted to reflect the career anchors of non-managerial workers. In particular, we found that the 'managerial competence' and 'pure challenge' anchors reflected Schein's focus on a managerial population. Study Two results show that our measure has good psychometric properties and that career anchors are differentially associated with attitudes

(organizational and occupational commitment) and career mobility intentions. For instance, entrepreneurial and challenge oriented individuals seek career opportunities across organizational boundaries, whereas people with a managerial anchor feel more committed to their organizations and seek internal promotion. In contrast, lifestyle oriented professionals prioritize their personal and family lives over their work. Our findings highlight some of the limitations of Schein's framework and extend the career anchor model by showing that stable career preferences are associated with specific career patterns and attitudes. They encourage further research on the correlates of career anchors and contribute to reviewing their role in the context of the changing nature of work and careers.

Keywords: career, schein, managerial competence, career development, career mobility intentions

Exploring the internal career orientations and subjective work experiences of working adults in the South African organizational context

COETZEE, M. (University of South Africa)

This research investigated the use of the research version of the Career Orientations Inventory (COI) (developed by Schein, in collaboration with DeLong, 1982a; 1982b), as a measure to determine individuals' career orientations and a Subjective Work Experiences Scale (SWES) (Bergh, 2009) to measure subjective work experiences. A secondary objective was to investigate whether the factor structure underlying the theoretical eight-factor career anchor model developed by Schein (1978) applies equally across various ethnic groups in the multi-cultural South African organisational context. The tertiary objective was to investigate whether individuals' career orientations significantly relate to their life satisfaction, job/career satisfaction, happiness and perceptions of work as a valuable activity. A quantitative survey design was used to achieve the research objectives. Responses were obtained from 2,978 participants (67% blacks including 1,592 Africans; 224 Indians; 186

coloureds, and 976 whites -33%) at predominantly managerial and supervisory level in the South African service industry. The mean age of the participants was 32, which implies well-established internal career orientations, motives and values. Exploratory Factor Analysis (EFA), Confirmatory Factor Analyses (CFA) and Structural Equation Modeling (SEM) were performed to achieve the objectives of the study. The exploratory factor analysis yielded a nine-factor structure and the confirmatory factor analysis confirmed five constructs as measures of the career orientations domain. A similar factorial pattern was observed across the African and white groups and a weaker factorial pattern across the Indian and coloured groups. Significant relationships were observed between the five-factor COI model and SWES variables. It appears from the statistical analyses that the career orientations of the participants relate to different aspects of the master career motives that underlie the general management, pure challenge and entrepreneurial/creativity career anchor constructs and that these master motives are significantly related to their life satisfaction, job/career satisfaction, sense of happiness and perceptions of work as a valuable activity. The findings of this study contribute valuable new knowledge both to practice and the field of Career Psychology.

Keywords: Career Orientations Inventory, Subjective Work Experiences Scale, career anchor model, career satisfaction, Schein

Investigating the role of career anchor congruence

STEELE, C. (University of Worcester)

The career anchor model has been widely researched and is used in practice to support individuals in their career development. Schein (1978) believed that congruence between career anchors and the work environment would lead to positive outcomes. However, Schein also believed that you could not tell an individual's career anchor from their job title. To date positive relationships have been found between career anchor congruence and job satisfaction (Danziger & Valency, 2006), career satisfaction (Igbaria & Baroudi, 1993), organisational commitment

and negative with intention to leave (Igbaria, Greenhaus & Parasuraman, 1991). However, contrary to Schein's recommendation, these studies have made assumptions about which career anchor(s) are best suited to particular jobs. For example, Bester, Phil and Mouten (2006) assumed the sense of service anchor was the dominant anchor for psychologists. The research presented here was conducted within a UK police organization. First, a commensurate measure of job anchors was developed using ratings by subject-matter experts of the anchors best suited to specific jobs in the organization. The resulting anchor profiles were compared with the career anchor scores of individual job incumbents ($n = 101$). Second, participants were asked to rate their perceived level of congruence between their career anchors and both their job and their organization ($n = 122$). Hierarchical regression analysis showed that using the job anchor measure congruence predicts 4.1% of the variance in job satisfaction but was not significantly related to organizational commitment. Individuals' perceptions of congruence predicted 3.2% of the variance in job satisfaction and 3.7% of the variance in organizational commitment. The study demonstrates that career anchors can be successfully matched to job roles within an organization and that there are significant relationships between career anchor congruence and job satisfaction and (to a lesser extent) organizational commitment. Future research should seek further validation of the job anchor measure and explore the role of career anchor congruence in relation to work related outcomes in a variety of contexts.

Keywords: career anchor model, career development, job satisfaction, career anchor congruence, schain

Career anchors as a tool for organizational career management in the IT sector

ARNOLD, J. (University of Applied Sciences in Business Administration, Zurich)

Several studies have highlighted the potential benefits of using career anchors as a tool for organizational career management (e.g. Yarnall, 1998) and cautioned that ignoring the

variety of anchors in an organization may have negative effects, for example on motivation (e.g. Crepeau et al.,1992). However, little attention has yet been focused on the question how exactly career anchors may inform organizational career management. One important step in this direction would be a better understanding of how career anchors may be related to certain demographic characteristics or specific behaviour of individuals. Only a few studies have focused on such aspects (e.g. Mignonac & Herrbach, 2003). In a wider ongoing study of career orientations of IT professionals in Switzerland, Germany and the United Kingdom, this gap in research was addressed, based on the 25-item measure of career anchors reported by Igbaria and Baroudi (1993). Career anchors of more than 1,600 Information Technology (IT) professionals in 10 different organizations of varying size from a wide range of industries in both the private and public sector were examined. Findings support earlier studies regarding the variety of career anchors among IT professionals, refuting the cliché that IT professionals predominantly have “Technical & Functional Competence” anchors. Second, results suggest that certain career anchors may be associated with specific demographic characteristics. For example, young employees had significantly higher “Lifestyle” anchors than older ones. Third, some career anchors seem to be linked to actual behaviour. Individuals with high security anchors, for example, showed significantly lower job mobility than those with low security anchors. Fourth, certain career anchors may be related to how individuals evaluate their career success. For example, scores on the “Managerial Competence” anchor were positively associated with self-rated career success. Using career anchors to inform Human Resources Management policies and practices may be especially helpful in the IT industry where attracting and retaining adequately trained staff remains a challenge for many organizations. Our findings reinforce the need to think beyond “dual career” technical vs managerial tracks for IT professionals, and to offer Human Resources packages that meet the specific preferences of different demographic subgroups.

Keywords: career anchors, organizational career management, career orientations, managerial competence, information technology

Challenges in psychological assessment: From temperament to metacognition and self-regulation

Chair(s): AIDMAN, E. (DSTO & Kingston University London)

Discussant(s): STANKOV, L. (National Institute of Education)

This symposium will examine the challenges faced by the modern practice of dispositional assessment. Some of them are relatively new (e.g., those flowing from the accumulating research evidence about the mechanisms and correlates of metacognition and self-regulation), while others have persisted for decades - such as temperament and biological underpinnings of individual differences, or situation-disposition dichotomy (Mischel, 1968, 2004), and the challenge of expanding the unimpressive upper bounds of predictive and explanatory power of dispositional constructs. Methodology, conceptual underpinnings and applications of multilevel dispositional assessment will be discussed. The construct of temperament will be examined in its utility to generate explanations of the observed relationships between psychophysiology, types of nervous system, personality, cognitive styles and psychopathology. Five contributions will present a range of approaches and tools to measure temperament, dispositional thinking styles and self-regulation traits. The connections between temperament, personality and mood disorders will be discussed – as well as between self-regulation and cognitive ability. General discussion will focus on the future of dispositional assessment and on the next-generation methods to improve its predictive and explanatory power.

Psychology of temperament: State of the art and links to personality

TROFIMOVA, I. (McMaster University)

Personality assessment methods typically analyse the “final product” of interactions between the social and biological factors underlying individual differences. The intermediate construct, temperament, is less well understood. The paper will examine the nature of temperament and its mediating role in the relationship between personality constructs and psychophysiology. This presentation reviews leading theories and models of temperament based on the Western European, Pavlovian and North-American traditions. Temperament is viewed here as referring to biologically based individual differences with main links to endocrinal-limbic regulation and to the morphology of the nervous system. Findings in psychophysiology, neuropsychology, personality theory and personality disorders are compared to the traits described as temperament according to various approaches. The final list of temperament traits is reviewed from the point of view of the activity-specific model, which describes the structure of temperament as involving three aspects of activity - arousal, lability and sensitivity to certain aspects of the environment – taken in intellectual, communicative and physical areas of activity. Emotionality is presented in this model as a limbic-driven endocrinal amplifier of the same three dynamical aspects. The contribution of biologically based temperament traits to the development of personality and personality disorders is discussed with reference to the adaptivity of social behaviour. Conversely, the component nature of personality traits is analysed relative to the structure of temperament.

Keywords: personality assessment, individual differences, temperament, psychophysiology, emotionality

Self-regulation traits: Factorial structure and relationship to cognitive ability

EROFEEV, A. (Moscow State University), AIDMAN, E. (DSTO & Kingston University London)

Self-control is a tiresome task: whether resisting temptation, managing impressions or suppressing emotions, it typically reduces subsequent self-regulation capacity, ranging from declined vigilance to impulsive actions we

later regret. Both cognitive load and ego-depletion literatures converge on recognising self-regulation capacity as a key influence on important life outcomes, e.g. overeating or stereotyping. Negative effects may flow from transient or chronic reduction in self-control. While transient effects can be effectively studied by experimental manipulation (Hoffman, 2008), examination of chronic effects requires valid and reliable estimates of individual differences in self-regulation. Current paper reports a series of studies examining the nature of dispositional self-regulation constructs, and their relationship with personality and intelligence. The Self-Regulation Trait Inventory (SRTI; Zverkov & Aidman, 1990) is a self-report instrument assessing individual differences in self-mastery in a range of occupational contexts. Earlier studies examined SRTI's factorial structure and psychometric properties of its subscales. Current study investigated associations between SRTI, Wonderlic's WPT and 16PF 's primaries on a group of 177 Russian speakers (university lecturers and postgraduates). SRTI produces estimates of emotional resilience, goal quality, action bias, impulsivity-rationality, artlessness-shrewdness, motivational locus (externally-internally driven self-regulation), her-and-now (versus strategic) bias, and communicative plasticity. Two second-order factors have been replicated in SRTI's factorial structure: (1) persistence (strength of intention, action bias, discipline) and (2) emotional control (self-mastery), as well as a global Self-regulation factor with internal consistency (α) ranging from .74 to .80. Correlation between the two ability estimates (WPT's general aptitude score and 16PF's factor B) was small but significant ($r = .18, p < .05$), and both significantly correlated with SRTI. Moreover, correlations between SRTI subscales and ability estimates were stronger than those between ability estimates and 16PF primaries. Results to date confirm the validity and reliability of SRTI constructs. Their incremental validity is discussed, in view of the reported associations between cognitive ability and 16PF primaries. SRTI appears a promising addition to assessment protocols used for occupational assessment. Potential applications and future development of the tool are discussed.

Keywords: *cognitive ability, self-regulation, impulsivity, individual differences, personality*

Temperament and mood disorders

SULIS, W. (McMaster University)

This study examines the interplay of depression and anxiety in comorbid subjects using nine dynamical and three emotional aspects of behavior. The focus is on the contribution of biological and temperament factors to mood disorders, based on administration of the Compact STQ-77 to healthy Canadian subjects and to clinical sample of patients diagnosed with anxiety and depressive disorders. The Compact version of the Structure of Temperament Questionnaire (STQ-77) has 12 temperament scales, including three emotionality scales (Neuroticism, Impulsivity, Self-Confidence) and 9 scales measuring dynamic aspects of activity (ergonicity, lability, sensitivity to feedback) analysed separately for physical, social and intellectual activities. Emotionality is presented in this model as an amplifier of the arousal, lability and orientation aspects of activity. Beck Anxiety Inventory, Hamilton Depression Scale and Symptom Check-List, the Clinical Diagnostic Interview and the File review were also utilised. It was found that depression was associated with self-reports of increased impulsivity and rigidity of behavior, and comorbidity of depression and anxiety worsened these reactivity aspects. The ability to sustain attention on a mental task and to learn new information was lower in depressed patients than in other groups. Depressed patients reported significantly lower physical energy, tempo of physical activity and plasticity of behavior. The presence of comorbid anxiety further worsened this effect. Comorbid depression and anxiety might be associates, decreasing adaptivity and the self-regulatory balance of behavior, leading to the development of extremes in behavioral reactivity (impulsivity and rigidity). Our results support the notion that depression, anxiety and normality lie along a continuum of self-regulatory abilities.

Keywords: *depression, anxiety, temperament, mood disorders, impulsivity*

Structure and measurement of temperament: Activity-specific approach

ROUSALOV, V. (Institute of Psychology, Russian Academy of Sciences)

To discuss the findings of the experiments related to the properties of nervous system, conducted in 1970-80 in Russia, from the perspective of the structure of temperament. EEG recording, measurement of speed of writing, speed of reading, generation of words, maximal and optimal tempo of performance in sensory-motor tasks and intellectual tasks, performance on non-verbal tasks with which subjects were unfamiliar, rigidity of perception in tactile and visual modalities, duration of the switch between one way of solving the task to another, mobility in attention, variability in line drawing, Torrance's Nonverbal Tests of Creative Thinking, meaning attribution to neutral objects, choice of profession, adaptivity strategies in the Dembo-Hoppe Level of Aspiration experiment, 25 measures of mobility, 20 experimental measures of plasticity, high-school grades, and a number of self-report tests. The experiments found consistent between-subject differences in the amplitudes and frequencies in EEG rhythms, evoked potentials, absolute thresholds in visual, auditory, and tactile modalities, strength of excitation and plasticity in auditory and visual modalities, problem solving in deterministic and probabilistic conditions, and the speed of solving problems using a variety of cognitive tests. The Structure of Temperament Questionnaire (STQ, 1989, 1997) assesses temperament using four scales: ergonicity (endurance, the ability to keep intensive work), plasticity (the ability to effectively switch between tasks or to change parameters of performance), activity tempo, and emotionality. We also found that these four temperamental traits are activity-specific and should be analyzed separately in three areas of activity: social, physical and intellectual. A 20-year STQ validation program using a number of experimental designs will be discussed. Temperament is likely to be activity-specific: the dynamic traits of energetic and lability components of behavior should be assessed separately in at least three areas of

activity (physical, social-verbal and intellectual).

Keywords: *temperament, emotionality, plasticity, performance, ergonicity*

Metacognition, personality and dispositional thinking styles

KLEITMAN, S. (University of Sydney), STANKOV, L. (National Institute of Education)

The paper reports the outcomes of two studies in which the test-taking metacognitive processes were assessed. The focus is on confidence judgements that people assign to their answers to cognitive test items. Overall, we pursued two broad aims: (1) to determine the factorial structure which underlies a diverse selection of thinking dispositions, self-concept and personality measures (2) to examine the relationship between those measures, and cognitive and metacognitive factors. An extensive battery of different thinking dispositions/cognitive styles measures relating to the way in which people deal with uncertainty was employed together with measures of personality, self-concept and optimistic/pessimistic outlook. We also assessed several key cognitive and metacognitive constructs involved in cognitive decision-making during test-taking. Pronounced individual differences were observed in confidence judgments defining a broad metacognitive self-confidence factor. Factor Analytic techniques were utilised to provide an integrative model for thinking disposition, personality and self-concept constructs and revealed five broad factors – Need for Structure, Outward Assuredness, Rigid Thinking, Openness and Metacognitive Beliefs. Structural Equation Modelling techniques were used to provide a broad path model summarising the relationship between these, and Gf/Gc cognitive abilities and the Self-confidence factors. The Metacognitive Beliefs factor positively predicted the Self-confidence and two factors that mark Intelligence. In contrast, the Rigid Thinking factor negatively predicted both ability factors. The results suggested that Self-confidence is a genuine psychological trait reflecting metacognitive processes that take place during decision-making involved in test-taking and

shares important links with both, people's metacognitive beliefs about the quality of their cognitive abilities their actual cognitive abilities. Overall, these results provide a solid basis for our understanding of the nature of key metacognitive processes involved in test-taking.

Keywords: *meta-cognition, personality, dispositional thinking styles, self-concept, individual differences*

Chronic illness management: Changing multiple health behaviors

Chair(s): RICARDELLI, L. (Deakin University)

Discussant(s): RICARDELLI, L. (Deakin University)

Over the last 10 years chronic illness prevention and management have emerged as critical issues in the health of populations. It is now accepted that the management of chronic illnesses such as diabetes and arthritis requires attention to changing multiple health behaviors such as physical activity and diet (Prochaska, 2008). In this symposium we will: (1) review approaches to chronic illness self management; (2) review the evidence base for interventions that involve changing multiple health behaviors; (3) describe the protocols for our diabetes self-management interventions conducted in Australia and China; (4) report the outcomes from the interventions; and (5) discuss issues in translating chronic illness self-management interventions into different cultural settings. Learning objectives include: To understand approaches to chronic illness self-management; To be aware of the strengths of multiple health behavior change interventions and issues associated with their delivery; To understand the issues in outcome measurement of multiple behavior change interventions; and to be aware of the barriers to translation of chronic illness self management interventions in different cultural settings. The symposium will draw heavily upon research that is currently being conducted in China and Australia in the Happy Life Club initiative. The initiative involves key Chinese clinical agencies in Beijing China and Monash University and the Australian Psychological Society.

What is chronic illness self-management and does it work?

BROWNING, C. (Monash University)

The aim of this paper is to set the context for chronic illness self-management. The paper

will discuss individual and group approaches, and focus on applications in primary health care settings. The paper is based on a systematic review of the chronic illness self management literature published in the last 10 years that has utilized randomized control trials or systematic review methodologies across key illness groups and health conditions in primary health care settings. The review process utilizes the Cochrane review methodology outlined in the Cochrane Handbook for Systematic Reviews of Interventions (Higgins & Green, 2008). The findings for the major reviews and RCT studies are presented across key different illness groups in primary health care settings. It was found that chronic illness self-management is not universally effective across all illnesses or settings. Care is needed to ensure that the program is effectively designed and implemented in order to maximize successful outcomes.

Keywords: *chronic illness, self-management, primary health care settings, Cochrane Handbook for Systematic Reviews of Interventions, illness groups*

Outcome measurement in multiple health behaviors

THOMAS, S. (Monash University)

The aim of this paper is to critically review outcome measurement for interventions that involve changing multiple health behaviors. The paper is based on a review of outcome measures and their psychometric and other desirable properties for inclusions in intervention studies targeted at changing multiple health behaviors. First, the differences between outcome, impact, output and process measures are discussed. A framework for assessing the utility of outcome measures is presented including a theoretical discussion of what measurement domains should be included in a measurement suite for this purpose. Engels' bio-psychosocial approach is advocated as a useful model for the selection of appropriate measurement domains within which psychometrically sound measures can be selected. An evidence-based theoretical rationale is provided for the selection and timing of outcome measures for interventions

that involve changing multiple health behaviors. The psychometric properties of key measures and the suitability for this purpose are reviewed. Outcome measurement for interventions that involve changing multiple health behaviors requires a sound theoretical approach to ensure that all relevant domains are included as well as careful selection of the best measures from a psychometric viewpoint. Indicative domains and measures drawn from the chronic illness self-management literature are recommended as well as timing of measurement.

Keywords: *interventions, health behaviours, Engels' bio-psychosocial approach, psychometrically sound, self-management*

The happy life club: Using the trans-theoretical model and motivational interviewing to achieve behavior change.

YANG, H. (Monash University)

The aim of the current study was to describe the Happy Life Club as a model for diabetes self-management in a primary care setting and present outcomes from the intervention. The Happy Life Club was developed by Monash University's School of Primary Health Care in conjunction with the Australian Psychological Society before being implemented in Beijing. The program's success there prompted the Chinese Government to name the Happy Life Club its number one showcase health initiative for their 60th anniversary celebrations. The Happy Life Club uses clinical coaches trained in motivational interviewing to support patients with some types of chronic illness to better manage their condition. Twenty-one Beijing health coach clinicians were trained in motivational interviewing and health behavior change principles. The coaches have implemented the program with an initial cohort of 100 clients over a 6-month period. This paper presents the results from the initial trial cohort of 100 clients for the first 6 months. Results from the first 100 clients are presented including at the physical level, a Framingham data set, at the psychological level, a series of measures relating to readiness to change and at the behavioral level, changes in the target health behaviors and in social interaction and behaviors. The results show

substantial program impact across these domains. The clients will be tracked for 2 years to assess program maintenance and sustainability of effects. We will model individual differences in program effects and sustainability in order to predict program effects and to identify clients with high and low probabilities of success. While the Happy Life program overall is successful, we need to better understand individual differences in outcomes. This paper provides preliminary findings as to outcome prediction for participants in a complex multiple behavior diabetes self-management intervention.

Keywords: Happy Life Club, diabetes, self-management, primary care setting, interventions

behavior changes is provided. An evaluation framework is presented and implemented.

Keywords: training, health coach clinicians, Happy Life Club, motivational interviewing, behaviour change

The Happy Life Club: Training issues in the translation of behavior change approaches to diabetes management in China using trained clinician coaches.

LINDNER, H. (Australian Psychological Society)

The aim of the current study was to analyze training issues for coaches in the Happy Life Club. 21 Beijing health coach clinicians were trained in motivational interviewing and health behavior change principles using a two-day workshop followed by a one-day workshop conducted in Beijing. The training was subjected to independent formal evaluation by staff from the Peking University using a structured evaluation tool. In addition, the coaches provided feedback in the one-day workshop about their experience of the training and their recommendations for its improvement. Both qualitative and quantitative data have been collected. The training was overall found to be successful but with a range of positive suggestions for improvement made by the participants. Analysis of the quantitative data shows a high degree of acceptance and impact of the training. Many participants described a paradigm shift in their approach to the clinical management of patients with diabetes. These suggestions are subjected to thematic analysis and presented with support from direct verbatim quotations from the participants. A critical analysis of MI training issues for clinicians involved in coaching of health

Clinical applications of illness perceptions in health settings

Chair(s): PETRIE, K. J. (University of Auckland)

This symposium presents recent application of illness perceptions in health populations. Illness perceptions are the organized cognitive models patients develop about their illness or injury. Previous work has shown that patients' perceptions of their illness predict a number of important health outcomes. The work presented in this symposium shows the broad range of this recent research and how illness perceptions are a valuable way of conceptualizing patients' reaction to illness and have strong relationships with outcome.

Illness beliefs and medication adherence in stroke patients

O'CARROLL, R. (University of Stirling), WHITTAKER, J. (University of Stirling), HAMILTON, B. (University of Stirling), DENNIS, M. (University of Edinburgh), JOHNSTON, M. (University of Aberdeen), SUDLOW, C. (University of Edinburgh)

The aim of the current study was to identify factors which predict poor adherence to secondary preventative medication in stroke survivors. Longitudinal study of 180 ischaemic stroke patients. Time 1 measures were used to predict time 2 adherence, measured 5-6 weeks later. Main outcome measure was patient self-reports of adherence and measurement of urinary salicylate levels. Hierarchical multiple regression analysis tested whether patients' beliefs about their stroke and medication explained additional variance in adherence, over and above that explained by demographic and clinical variables. Self-reported adherence was generally high. The final multiple regression model predicted 24% of the variance in adherence. Three variables made a significant contribution to the prediction of poor adherence: (1) younger age, (2) increased specific concerns about medications and (3) lower perceived benefit of medication. The urinary salicylate assay failed to differentiate

between patients taking and not taking aspirin. Interventions to improve adherence could usefully target patients' beliefs (concerns and perceived benefits) about their medication.

Keywords: stroke, medication, longitudinal study, adherence, beliefs

How do illness perceptions influence recovery from cardiac valve surgery?

WEINMAN, J. (Kings College London), HANKINS, M. (Kings College London), RIMINGTON, H. (Guy's and St Thomas' NHS Foundation Trust)

Since both illness perceptions (IPs) and depression have been found to influence outcome in cardiac patients, the present study was partly designed to examine possible interactions between patients' cognitions and emotions to gain an understanding of possible causal links between them. Thus its purpose was to assess the extent to which baseline illness perceptions predict subsequent depression, and vice-versa, in recovery from cardiac valve surgery.

Methods: The study sample consisted of 225 patients having first time cardiac valve replacements, with a mean age of 67 years. Each patient's illness perceptions (IPQ-R) and mood (HADS) were assessed by questionnaire immediately pre-surgery and 1 year later. Patients were also assessed for severity (NYHA), ambulation (6 minute walk), cardiac function and quality of life on both occasions. Pearson correlations were used to examine associations between illness perceptions and depression, and structural equation modelling (SEM), using both cross-lagged and reciprocal models, was used to examine the extent to which baseline IPs predicted 1year depression and vice versa. Both IPs and depression predicted one year outcomes. All IPs, except timeline, were concurrently associated with depression pre-op and at 1 year, with consistently stronger associations at one year. The results from the cross-logged and reciprocal models showed that baseline depression is significantly associated with patients' 1 year perceptions of personal and treatment control as well as their emotional representation of the condition. In contrast, two baseline illness perceptions (perceived

consequences and illness coherence) significantly predicted depression scores at 1 year. These findings therefore indicate which illness perceptions could be targeted to reduce depression and improve one year outcome in cardiac valve surgery patients.

Keywords: *illness perceptions, depression, cardiac patients, treatment*

Differences between parental and clinical staff perceptions of high-risk newborns and their treatment

PETRIE, K. J. (University of Auckland), BROOKS, S. (University of Auckland), ROWLEY, S. (Newborn Services, Auckland City Hospital), BROADBENT, E. (University of Auckland)

We examined how the perceptions of parents of high-risk newborns concerning their baby's illness and the effectiveness of the treatment their infants were receiving differed in relation to clinician perceptions and a standard paediatric measure of illness severity. We also examined how these related to the stress reported by parents. Parents of 102 consecutive babies admitted to the high dependency care and neonatal intensive care units at Auckland City Hospital completed illness and treatment perception ratings of their infant's condition as well as the Perceived Stress Scale on day 3 to 5 days following admission. We also collected Neonatologist ratings and a CRIB-II assessment at this time. We compared parent and clinician ratings as well as the relationship between stress and parental perceptions of their infants' illness and treatment. Unlike clinician ratings, parents' illness perceptions of their infants were not significantly correlated with birthweight, gestation or CRIB-II scores. Parents held significantly more negative illness perceptions than clinicians. While clinicians illness perception ratings were significantly different for high dependency and neonatal intensive care infants, parents ratings did not show the same clear distinction. Parental stress was unrelated to objective measures of illness severity. Clinicians should be aware that parents' views of their infants are likely to be significantly more negative than their own assessments and this may lead to

misunderstandings and misinterpretations in communication.

Keywords: *high-risk newborns, treatment, illness severity, stress, perceptions*

Using illness perception profiles to describe patients' response to illness

BROADBENT, E. (University of Auckland)

To develop prototypical profiles of illness perceptions for major illness groups to allow individual patient's responses to be compared. Data was extracted from previous studies of illness perceptions that used the Brief Illness Perception Questionnaire. Profiles of illness perceptions were constructed for different illness groups and within the same illness group across time. Patients who fell outside the norms for specific illnesses were identified using cut-off scores. Illness perception profiles showed significant differences across illnesses suggesting that each type of illness has its own distinctive pattern of illness perceptions. Individuals who fell outside normative ranges differed from the main groups on illness outcomes. Within-group profiles were shown to be sensitive to change across time through the recovery period. The construction of profiles and norms in illness perception research is new and may help with the identification of individuals who may benefit from psychological interventions to improve their adjustment to illness.

Keywords: *illness perceptions, illness groups, psychological interventions, adjustment*

Cognitive functioning of children and adolescents after abuse and neglect: A neuropsychological research program

Chair(s): TUCKER, A. (La Trobe University)

Discussant(s): PESTELL, C. (Neurosciences Unit, Department of Health, Western Australia)

Contemporary reviews of child abuse and neglect have concluded that such maltreatment is related to impairments in cognitive development and poor school performance in children and adolescents. Whilst the adverse neuropsychological effects of physical abuse involving the head are well appreciated, there is now a substantial literature indicating that psychological trauma has deleterious effects on brain development and may result in long term consequences for cognition and behaviour. The developing brain is experience dependent, that is, it requires various forms of stimulation to activate neurophysiological processes that promote growth and enhance neuronal connectivity. When these experiences are absent or adverse in nature, the brain's developmental trajectory may be altered leading to impaired structure and function. This symposium addresses fundamental questions about the nature and extent of cognitive deficits in maltreated children and adolescents and their relationship to theoretical issues of brain development and functioning. The first of the three papers in this symposium describes theoretical and practical aspects of child maltreatment, and reports on a series of children and adolescents who have had neuropsychological assessment as part of a routine clinical assessment. The second paper describes the pattern of major cognitive deficits in a group of maltreated primary school aged children, compared to a matched control group. The third paper describes the cognitive functioning of a group of maltreated adolescents who were admitted to a secure welfare facility. Compared to matched controls, these adolescents had major deficits in a range of

cognitive areas. Key learning objectives include: (a) child maltreatment and risk factors for brain development; (b) the pattern and extent of deficits in cognition for maltreated children and adolescents; (c) implications of cognitive deficits for care, clinical services and education.

Brain development, child maltreatment and cognitive functioning in a clinical sample.

TUCKER, A. (La Trobe University)

This paper reviews some key theoretical aspects of brain development through the first two decades of life and describes key risk factors to brain development for children subjected to abuse and/or neglect. Child maltreatment has been associated with poor school performance however the extent and nature of any underlying cognitive deficits is not well documented. This paper describes the nature and extent of cognitive deficits in a sample of children and adolescents referred to a clinical agency. 48 children and adolescents [6-16 years, mean 11.9 years; 37 male, 11 female], referred to the Take Two (therapeutic) service, had individual neuropsychological assessments as part of overall clinical evaluations. These assessments evaluated the child's overall cognitive functioning (FSIQ), and specific cognitive functions including, visual and verbal memory, visuographic skills, and executive functioning. Scores were compared to normative data. It was found that 16.7% [$n = 8$] of the sample had FSIQs in the Intellectually Disabled range ($FSIQ < 70$) and a further 37.5% [$n = 18$] had FSIQs in the Borderline ID range. Examination of the four additional WISC-4 Index scores showed that there were statistically significant differences [at .05 level] in at least one pairwise comparison of Index Scores for 5 of the 8 participants in the ID subgroup, and for 13 of the 18 participants in the Borderline subgroup. Examination of the data for those with an FSIQ in the low average or average ranges [$n = 23$] showed evidence of unpredicted and markedly lower scores in additional specific cognitive skills including, visuographic ability, visual and/or verbal memory, and executive functioning. This sample of clinic clients had a heterogeneous pattern of cognitive impairment. In a subgroup

the cognitive impairments were very wide ranging and substantial. The complementary subgroup had better overall cognitive resources but many had specific deficits including higher cognitive functions. Deficits in executive functioning may markedly restrict a child's ability to utilize their cognitive strengths. Whilst this particular sample may reflect the more impaired clientele the deficits here may be attributed, at least in part, to the effects of abuse and neglect on brain development.

Keywords: *brain development, risk factors, children, maltreatment, cognitive deficits*

A neuropsychological investigation of cognitive outcomes in primary-school aged children with a history of maltreatment.

SCHIRMER, L. (Victoria University)

The aim of this study was to examine the neuropsychological profile of primary-school aged children with a history of maltreatment, in comparison to a group of non-maltreated peers, and to population norms. In particular, it was hypothesized that late developing brain systems, including language and executive control systems, would be impaired relative to controls. 28 six- to eleven-year-old children (22 male, 6 female) with a maltreatment history were compared to a control group of peers, matched for gender and socio-economic status. Maltreatment status was rated according to Barnett and Cicchetti's Maltreatment Classification System; socio-economic status for each child was based on parent/carer's occupation and educational status. Children were assessed using a battery of neuropsychological measures assessing general cognitive ability; expressive and receptive language skills; selective, sustained, switching and divided attention; working memory; and a parent/carer rating of everyday executive functioning. The study showed that as predicted, children with a maltreatment history displayed deficits in full-scale IQ and verbal intelligence; but contrary to predictions, deficits were also observed in perceptual reasoning. Effect sizes were large, and children performed on average one standard deviation below population norms. Expressive language was found to be consistently reduced amongst

the maltreated group, and there was also a significant difference between groups on the receptive language measure. In addition, children displayed impairments in behavioural-executive skills, and in divided attention. Finally, lower scores were observed relative to controls in working memory abilities. The study suggests a neuropsychological basis for some of the academic and social difficulties encountered by maltreated children. The results support the hypothesis that expressive language and executive abilities are affected by maltreatment.

Keywords: *neuropsychological profile, children, maltreatment, language, executive control systems*

General and specific cognitive deficits in adolescents with histories of maltreatment

RUVCESKA, V. (Victoria University)

The aim of this study was to conduct a prospective controlled study of the cognitive profiles of adolescents in short term secure accommodation. Typically, these adolescents have had involvement with child protective services since early childhood, characterized by long histories of severe abuse and neglect. A subset of participants with full scale IQs in the low average range and above (FSIQ >80) were involved in this analysis. A total of 39 participants were recruited from the Secure Welfare Service (SW; Victorian Department of Human Services) and were aged 12-16 years ($M = 14.6$ years). A control group ($n = 43$) matched on FSIQ, age, gender and SES was recruited from secondary schools. All participants were assessed on a battery of cognitive tests of, learning and memory, processing speed, executive functioning and attention, language, visuospatial function and perceptual reasoning. Measures of depression and anxiety were also taken. Despite performing comparably to controls on FSIQ, SW participants showed significant impairments in a number of specific cognitive domains. They scored significantly lower than controls on measures of working memory, executive function and attention, learning and memory, visuospatial function and processing speed. This study adds to the multiple lines of evidence which suggest that the experiences of

childhood maltreatment affect brain development, structure and cognitive performance. Theoretically, poor early attachment relationships, the neurotoxicity of stress hormones, direct physical injuries and lack of stimulation during critical periods have all been implicated in the brain changes evident in maltreated children. Under severe circumstances of abuse and neglect, as seen in adolescents who are in secure accommodation, these mechanisms appear to relate to changes in particular brain regions coinciding with specific cognitive impairments. The current study indicates that experiences of severe childhood maltreatment are associated with major cognitive deficits in working memory, executive functioning and attention, learning and memory, visuospatial function and processing speed. This lends weight to the argument that the neurophysiological mechanisms associated with child abuse and neglect alters the developmental sequences of specific brain processes that mediate particular cognitive abilities.

Keywords: cognitive deficits, adolescents, maltreatment, short term secure accommodation, child protection

Collective memory of political and natural events

Chair(s): MULUK, H. (University of Indonesia)

Discussant(s): MALIK, I. (University of Indonesia)

This symposium would address issues of collective memories in the community after experiencing social/political and natural events/disaster such as; earthquake and tsunami. Three studies representing how natural events event were being socially remembered and becoming the collected memories that would impact to the health and resiliency of the communities Those three studies are chosen from three different countries. One study gives an example how collective memories as it was represented by historical conflict becoming obstacles to peace processes such as; conflict resolution effort or reconciliation. This symposium is intended to explore the way individual memory were intertwined with social memory and becoming represented into various form "collective memories" that would give certain meaning and impact into community life. Implication of these three studies to the communities' health and resiliency is the ultimate goal of this symposium.

Collective memories of natural disasters

BEDAR, A. (Private consultant), RIDE, A. (University of Queensland, Solomon Islands), DI BREHERTON, D. (University of Queensland)

The study of memory as an individual cognitive process, necessary for learning, is an important area of psychology. Psychology studies of natural disasters have tended to focus on the negative role played by traumatic memories. This paper sees a largely positive role, with some qualifications, for collective memories as communities adapt to the experience of disaster. As part of a wider international study of community resilience in the face of natural disaster, interviews were conducted after an earthquake in Pakistan. The 10 participants were aid workers, well place to reflect on

individual, community, national and international responses to the earthquake. Interviews were conducted in English or Urdu and transcribed into English. The approach was narrative, encouraging participants to tell their story of the disaster, of their own and other peoples' responses, and then to reflect on how the disaster has changed the community. A qualitative analysis of the data was conducted. Facing a natural disaster such as an earthquake calls upon the survivor to rapidly make sense of warning signs, seek out further information, try to make sense of the situation and make decision which might have life or death consequences. After the disaster people want to talk about and share their experiences. Repeated storytelling in the community helps people to make sense of their experience and forges social bonds based on facing trouble together. While the stories told serve these positive functions they can also have features which are not adaptive, such as the transmission of stereotypes, the simplistic attribution of blame or the creation of a sense of dependence. Official commemorations of the event start quite quickly after the event, with funerals and religious services. As memories begin to fade anniversaries of the disaster ensure it is remembered. Official written reports of the disaster begin to take precedence over oral accounts and there is some loss of valuable experiential learning and community wisdom. Careful psychological study of community narratives has implications for more effective adaptation to challenging environments.

Keywords: resilience, cognitive processes, natural disasters, traumatic memories, community

Collective memories of West-Sumatran earthquake and their relation to community resiliency

EKA PUTRI, D. (University of Indonesia)

Indonesia's geographical conditions are in the high earthquake-prone that requires a serious effort in disaster mitigation, so that the losses inflicted disasters both physically and psychologically can be minimized. This study aims to find out the positive aspects of experiencing traumatic event in community experiencing natural disasters, in which with

these memories helping the community become more resilient. In this study, interviews were conducted after an earthquake in Padang, West Sumatra. The participants were 10 adults, whom experiencing the event directly. Interviews were conducted in Indonesian language. The approach was narrative, encouraging participants to tell their story of the disaster, of their own and other peoples' responses, and then to reflect on how the disaster has changed the community. A qualitative analysis of the data was conducted. After experiencing the event, people want to talk about their experience and share it to others. This process reveals the effectiveness of powerful kinship, and strengthening social bonds. Facing a natural disaster such as an earthquake increasingly enable religious organizations to participate in giving spiritual support for victims, so that they can accept the event more and continued life, make decision which might have life or death consequences, such as better home construction. Careful psychological study of community narratives has implications for more effective adaptation to challenging environments.

Keywords: natural disasters, resilience, traumatic events, community, adaptation

Collective memories of Acehese survivors of the 2004 Tsunami

PELUPESSY, D. (University of Indonesia)

The word "trauma" has become part of everyday language, where people talk about experiences as having been "traumatic" or someone having been "traumatized" as a consequence of distressing life events (illness, accident, death, divorce). Apparently, trauma has also dominated discourse on psychological impact of disaster. This study aims to look at beyond trauma, but more on how people recognize the event and conceive it. In-depth interview to 12 participants who experienced near-death experience when the 2004 tsunami struck Aceh region. Among them were aid workers and volunteers, midwife, and housewife. All interviews conducted in Indonesian language. Through a narrative approach, all interviewees shared the stories what happened at the moment of the tsunami, how they and other people responded to it,

and how it remembered by the community. A qualitative analysis of the data was conducted. People make sense what happened differently. They recognized it from many resources. It influences community both in positive and negative ways. Remembrance and commemoration of the event serve as adaptive and process of healing function. Careful psychological study of community narratives has implications for more effective adaptation to challenging environments.

Keywords: *trauma, distress, natural disasters, healing*

Collective memory and conflict resolution

TINT, B. (International and Intercultural Conflict Resolution Graduate Program Portland State University)

This paper explores history and memory and their impact on long term, intractable conflict. Memory is strongly connected to narrative, commemoration, identity and emotions and becomes embedded in societies fraught with long term conflict. Conflict resolution literature is explored in terms of how it addresses issues of the past. This paper presents us with a deeper theoretical understanding of these issues and will offer some empirical research in this area and suggest some implications for practice. The empirical research into the study of history, memory and long-term, intractable conflict includes interviews with members of the Israeli and Palestinian communities. A variety of constructs emerge which inform conflict resolution practice. These include a strong orientation to the past, its link to identity, emotion and how past beliefs inform present perceptions. Recommendations are offered for how to integrate historical matter more fully into working with issues of peace and conflict resolution.

Keywords: *memory, conflict, narrative, identity, conflict resolution*

Community psychology applications to organizational and community well-being: Research and action

Chair(s): PRILLELTENSKY, I. (University of Miami)

This symposium presents findings related to organizational and community well-being interventions in Miami, Florida, and Melbourne, Australia. The projects in both countries follow community psychology principles to advance psychological well-being and social justice. Four community psychology principles underpin the interventions: Strengths, Prevention, Empowerment, and Community Change (SPEC). In this symposium we present a mixed-methods multi-case study of organizational change in human services in Miami, and a coalition building effort in Melbourne. We will present in four papers process and outcome findings from two waves of data collection in years one and two of the Miami project. We then present work based on a multi-agency partnership in Broadmeadows, Melbourne, to promote the development of communities for children. The five presentations will demonstrate the application of the SPEC model to work with community based organizations dedicated to the promotion of psychological well-being of children, families, and communities. The symposium contributes to two main bodies of literature. First, it contributes to the literature on organizational development. Second, it contributes to the literature on community based efforts to promote justice and well-being. With respect to the literature on organizational development, there is ample scholarly work on the generic conditions that lead to healthy organizations, but there is very little research documenting the specific organizational conditions leading to strength-based, preventive, empowering, and community change practices. With respect to the literature on the promotion of social justice and well-being, this research documents the factors inhibiting and enhancing efforts by community

based organizations. The learning objectives are to (1) understand the theory behind the SPEC paradigm; (2) understand the application of the SPEC paradigm in community based organizations; (3) learn about methods of transformation in community based organizations; (4) learn how to implement value based and action research methodologies; (5) learn how to create community coalitions and their challenges.

Necessary conditions for the promotion of organizational and community transformational practice

PRILLELTENSKY, I. (University of Miami)

The purpose of this presentation is to introduce a framework for the promotion of justice and well-being in the lives of individuals, organizations, and communities; and to explore the organizational conditions required for transformative practice. We define transformative practice as consisting of Strength, Preventive, Empowering, and Community Change (SPEC) approaches. The SPEC model is conceptualized along four domains: temporal, ecological, participation, and capabilities. The temporal domain refers to the timing of interventions while the ecological domain pertains to the site of interventions, ranging from person-centered to community-centered. The participation domain refers to voice and choice of citizens. The capabilities domain refers to the concentration on either strengths or deficits. Multi-case study, qualitative, action research methodology with ten different health and human service organizations in two cities in the United States. The qualitative data that is the basis of this presentation was gathered through interviews, focus groups, consultations and team reflections over a period of seven years. The findings demonstrate that there are two major sets of conditions required for organizations to engage in transformative practice. The generic set of conditions includes climate related variables such as how effective, reflective, and affirmative each organization is. A second set of generic conditions includes variables related to human and financial resources. The first set of specific conditions pertains to the level of consciousness of each organization with

respect to levels of analysis of problems, and to issues of injustice and power differentials. The second set of specific conditions leading to transformative practice entails support and legitimacy from leadership, boards, and funding agencies. The model is a useful pedagogical tool for the transformation of community based organizations. For the model to be effective, organizations must be ready to engage in serious work and invest in the creation of an affirmative, effective, and reflective environment.

Keywords: *justice, well-being, transformative practice, strengths, community change*

Organizational interventions to promote community well-being: Program evaluation of the Miami SPEC project

MCKENZIE, A. (University of Miami)

The purpose of this presentation is to evaluate the process and the preliminary outcomes of a project designed to promote Strengths, Prevention, Empowerment, and Community Change (SPEC) in the work of five health and human service organizations in Miami, Florida. The name of the project is Miami SPEC: Learning and Changing by Doing. The intervention with five organizations in Miami consists of five components: training, team development, consultation, professional development, and action research. Qualitative and quantitative methods are used to evaluate the interventions. Findings demonstrate that the intervention is having an impact in the way organizations think about social problems and the means they use to address them. It is clear from the data that organizational readiness has an impact on the pace and degree of progress towards SPEC practice. In addition, it is also clear that certain conditions must prevail within the organization prior to the practice of SPEC in the community. The significance of this work lies in the methodic implementation and evaluation of an intervention designed to make organizations more effective in their aspirations to promote justice and well-being. Despite aspirations to become agents of social change, many community organizations perpetuate the status quo by focusing on deficits and on reactive, disempowering, and individualistic approaches. This work goes

beyond declarations of intent to pursue social justice. This intervention tries to actually change how organizations do their work in order to align them better with their visions of social justice.

Keywords: *strengths, prevention, empowerment, community change, social justice*

The meaning and practice of Strengths, Prevention, Empowerment and Community Change (SPEC)

PRILLELTENSKY, O. (University of Miami)

The purpose of this paper is to describe the meaning and the practice of SPEC in five community based organizations. Data derive from qualitative and quantitative data collection with five educational, community, and human service organizations in Miami. It is evident from the data that individuals and organizations as a whole hold multiple, and at times contradictory meanings of the four concepts of SPEC. Similarly, results show that there are continua of meanings and implementation of SPEC. Whereas some organizations impose a rigorous definition of client empowerment, such as consumer representation on boards, others adopt a more lenient definition of empowerment, such as having clients fill out a customer satisfaction survey. An appreciation for the diverse perspectives and practices of organizations is required in order to align organizations better with a mission of justice and well-being. This study begins to show the multiple interpretive and implementation frameworks that organizations employ in their work. This understanding precedes effective organizational change.

Keywords: *strengths, prevention, empowerment, community change, well-being*

SPEC Check: A deliberative approach to quantifying alignment with SPEC (Strengths, Prevention, Empowerment and Community Change) principles in community based organizations.

EVANS, S. (University of Miami)

To present a methodology designed to assess alignment of community based organizations with SPEC principles and findings from the current study. We conducted structured group interviews on-site at the various organizations participating in the parent project. Similar to other collaborative approaches such as Empowerment Evaluation (Fetterman, 1994; Fetterman & Wandersman, 2005), the process combines individual reflection and scoring with group dialogue and consensus. We first have program personnel complete the short SPEC Check questionnaire on their own. The eight question SPEC Check questionnaire is modeled after the organizational culture inventory developed by Cameron & Quinn (2005). Participants are asked to divide 100 points between two "competing values" in each of the four SPEC domains. Early analyses suggest that the SPEC check tool and process provides a useful structure for organizational program personnel to reflect on their work. We have learned that each member of a given program may see the program in a different way, and the structured process helps them to build a shared understanding of program goals and actions. Each organization received a spider diagram of their SPEC alignment weighted by program dollar allocation, and participants decide together if the balance is consistent with their stated mission and values. Depending on the program, there are different levels of alignment with each domain of SPEC. However, this research provides us with concrete examples of how staff, teams, and entire organizations frame each of the four SPEC constructs and how these values are applicable to their work. One thing that we have heard loud and clear in this project is that community-based human service organizations do not take the time, or do not have the time, to reflect meaningfully on the process and outcomes of their programs. The SPEC Check process affords organizations this opportunity and gives them useful data that can inform action.

Keywords: *strengths, prevention, empowerment, community change, well-being*

Building a community for children: A multi-agency partnership in a Melbourne

TURNER, C. (Broadmeadows Care)

The purpose of this presentation is to track community services agencies working together, over a period of five years for a common purpose. Partnerships develop the strengths of a local service system, and empower the local community, which includes service providers, to work together for positive community change for families and young children. The Final Evaluation of the Communities for Children project uses an outcomes framework to consider nine key outcomes over a three year period. The framework considers progress towards outcomes for children, for families and for the community. Data was collected from 35 community projects and twenty five community agencies across three years. Data included partnership information, longitudinal information from families and qualitative journals from professionals implementing the projects. The large scale project was able to actively engage families with young children (0-6 years) to take part in social and educational activities for themselves and their children. A smaller scale longitudinal study embedded in the larger evaluation found that both parents and children had improved their social connectedness and that improvement was maintained for parents and continued to improve for parents over a three year period. The partnership also improved its range and depth over that period. It took on a larger geographic area and began to act as the strategic planning body for Children's services within the local Government area. The process of developing a planning and advocacy body has challenged the Early Years Partnership to improve its focus on community strengths, empowerment, prevention (a particularly important principle and process for young children), and community change. The process is neither static nor complete. The SPEC principles are used within the partnership agencies to recognize each other's strengths and to use those strengths to support community change, family change and improved social and educational results for children.

Keywords: *community services, empowerment, community change, longitudinal study, children*

Co-morbidity between emotional and physical health: Developing early identification strategies

Chair(s): CALTABIANO, M. (James Cook University)

Discussant(s): CALTABIANO, M. (James Cook University)

Depression and other negative aspects of emotional health are often found to co-occur in individuals who have a chronic illness and other health problems, including those diagnosed with a substance use disorder. In order to develop effective models of care for patient groups with co-morbid depression, we need to first identify and understand the needs and challenges experienced by these individuals. The present symposium examines the nature and the predictors of emotional health problems among individuals in four different health contexts. In addition, the symposium highlights the need to develop early identification strategies that effectively screen for and manage these problems. The first paper examines demographic, medical, and psychological predictors of quality of life among young people with epilepsy. The main predictors of quality of life were depression and anxiety. The second paper focuses on coping resources, depression, exercise and diet as predictors of mental and physical health status among adults with a chronic illness. Poorer coping resources and depression predicted worse mental health, and depression predicted worse physical health. The third paper evaluates the importance of screening for mood disturbance in stem cell transplant (SCT) patients. Given that many SCT patients experience clinically elevated levels of distress, it is essential that these are screened for pre, during and post treatment. Patients were most at risk of 2 days prior to discharge and the most significant predictor of adjustment at 4 months was lower distress, especially depression at admission. The last paper examines the clinical profile, physical health, and family and social relationships of clients

diagnosed with depression and/or anxiety and substance use disorders. The majority of clients had at least two mental health problems and was highly troubled by their health and family problems. Recommendations for developing and implementing early identification strategies will be discussed.

Anxiety and depression as best predictors of quality of life for young people with epilepsy

CLARKE, A. (Optimal Health and Performance),
CHRITCHLEY, C. (Swinburne University of
Technology)

The aim of our study was to assess the Health Related Quality of Life (HRQOL) of young people with epilepsy. A total of 114 young people (35.1% male), ranging in age from 10 to 24 years with a mean age of 17.92 years ($SD = 3.90$), completed a paper (60.5%) or Internet survey (39.5%) that included demographic, medical and psychosocial questions. The survey included: demographic and medical history questionnaires, Quality of Life in Epilepsy for Adolescents Scale (QOLIE-AD-48), the Family Assessment Device (FAD-GF), Adolescent Coping Scale (ACS-SF) and Hospital and Anxiety Scale (HADS). The young people were mainly recruited from community support groups in each state of Australia and New Zealand, neurologists who specialize in treating epilepsy, and Internet support groups. Using multiple regression, demographic, medical and psychological variables were used to predict quality of life. Together the variables explained 47.8% of the variance, with only higher depression (Beta = -3.06) and anxiety scores (Beta = -2.93) significantly predicting lower HRQOL. Gender, age, duration and severity of illness, family functioning, and coping style were not significantly associated with HRQOL. In addition to seizure management, clinicians can promote better quality of life for young people with epilepsy by actively screening and managing anxiety and depression symptoms.

Keywords: *anxiety, depression, health related quality of life, epilepsy, adolescents*

Co-morbid depression and chronic illness related to coping and physical and mental health status

DI BENEDETTO, M. (University of Ballarat)

The aim of the current study was to evaluate the influence of coping resources, depression, diet and exercise on mental and physical health status. A partial latent structural regression analysis was used in a sample of 113 participants (59 females and 54 males) with a mean age of 59.38 years ($SD = 10.52$). Coping resources, depression, and exercise explained 52% and 26% of the variance in mental and physical health status, respectively. Fewer coping resources predicted higher levels of depression and both predicted worse mental health. Only higher levels of depression predicted worse physical health status. There were also significant indirect effects of coping on mental and physical health status through depression. Fewer coping resources predicted higher levels of depression. These results highlight the important role of psychological factors in the care of individuals with chronic illness. The development of cognitive, social and emotional coping strategies is important for managing depression and supporting positive mental health. Additionally, the management of depression is important in maintaining positive physical health.

Keywords: *depression, chronic illness, coping, mental health, physical health*

Psychological screening and prediction of distress in Stem Cell Transplant patients: A longitudinal study

HORNE, D. (University of Birmingham), EGGEN, J.
(University of Birmingham), CRADDOCK, C.
(University of Birmingham), HOWARD, R.
(University of Birmingham)

Many stem cell transplantation (SCT) patients suffer from clinically elevated levels of distress which may persist after treatment ends. Identification of factors that predict post-treatment maladjustment is useful for targeted screening and individualised psychological interventions. The aim of the current longitudinal study was to identify the extent to which pre-treatment psychological variables

predict distress during and post SCT treatment. 62 participants undergoing SCT completed questionnaires upon admission, 2 days prior to discharge, 1 week post discharge, at first outpatient appointment, and 4 months post-transplant. Psychological assessment involved the use of validated self-report instruments assessing depression and anxiety (HADS) and mood disturbances and fatigue (POMS). Depression, anxiety and mood disturbance peaked post-treatment prior to discharge, at which time 63% of the patients reported clinically elevated levels of depression and 29% reported clinically elevated levels of anxiety. At 4 months post-treatment these percentages were 23% and 17% respectively. The most significant predictor of adjustment at 4 months was lower distress, especially depression at admission. This study shows that psychological assessment of SCT patients using simple standardised questionnaires provides reliable data about patients' levels of distress (anxiety, fatigue and depression) at time of admission. This early assessment provides reliable prediction of distress during and after SCT. These findings have implications for psychological intervention at all stages of SCT, pre, during and post treatment. Special attention needs to be paid to patient levels of depression and fatigue.

Keywords: stem cell transplantation, psychological interventions, longitudinal study, distress, depression

The clinical profile and needs of clients diagnosed with substance use and depression and/or anxiety problems

RICCIARDELLI, L. (Deakin University), STAIGER, P. (Deakin University)

The aim of the study was to detail the background characteristics, clinical profile, physical health, and family and social relationships of clients diagnosed with co-morbid high prevalence mental health (HPMP; i.e., depression and/or anxiety) and substance use disorders. 49 males and 36 females from two Alcohol and Other Drug (AOD) units in a larger outpatient metropolitan service completed clinical interviews and self-report measures. Assessed were demographics; mood, anxiety and alcohol/substance use

disorders; personality and post traumatic stress disorders; physical health; and family/social relationships and other main sources of social support. Clients had limited physical and social resources, and complex clinical profiles: 52.9% had not completed high school; 88.1% were on welfare benefits; 67.1% had at least two substance use disorders; 71.8% had two mental health disorders; 77.0% had four or more personality disorders, and 40.7% scored above the cutoff indicative of post traumatic stress disorder. In addition, 40.8% of males and 66.7% of females were highly troubled by their medical problems, 41.7% of males and 48.6% of females were troubled by their family problems, and 51.0% of males and 69.4% of females relied on organizations for their main source of social support. These findings highlight the far ranging clinical, health and social needs of clients with a dual diagnosis; and the need to develop early identification strategies that effectively screen for and manage these diverse issues.

Keywords: background characteristics, mental health, substance use disorders, anxiety, depression

Constructivist approaches to career counselling

Chair(s): MCMAHON, M. (The University of Queensland)

Discussant(s): SAVICKAS, M. (North Eastern Ohio Universities College of Medicine)

Career counselling has a long history. In recent years it has received increasing influence from constructivism, and several approaches to constructivist career counselling have been advanced. Constructivism may be regarded as a way of thinking, a set of values, or a philosophical position that may be internalised and applied by career counsellors. Common to constructivist approaches to career counselling are constructs such as agency, meaning making, and connectedness. Further, such approaches place value on the client counsellor relationship, subjectivity and the place of emotion. Despite their increasing popularity and intuitive appeal as a way of working with clients, constructivist approaches to career counselling tend to be developed and understood at a theoretical level more than at a practical level. Indeed, prescriptive approaches, sets of techniques or interview sequences are not consistent with constructivism. Career counselling in general, and constructivist career counselling specifically, has received less research attention than other aspects of the career field and there remains a gap between theory, practice and research. There is evidence that this situation is being redressed through research being undertaken in several countries. The purpose of this symposium is to present research programs from five countries dedicated to developing a better understanding of constructivist approaches to career counselling. The key learning objectives of this symposium are to: (1) develop an understanding of a range of constructivist approaches to career counselling; (2) identify constructs common to constructivist approaches to career counselling; (3) develop an understanding of research methodologies investigating constructivist approaches to career counselling; (4) consider issues and challenges

facing research into constructivist approaches to career counselling.

Identity construction and career development interventions with adolescents and emerging adults

GUICHARD, J. (Conservatoire National des Arts et Metiers Paris), POUYARD, J. (Conservatoire National des Arts et Metiers Paris), DUMORA, B. (Conservatoire National des Arts et Metiers Paris)

The aims are to outline a theoretical approach to identity construction, to present empirical observations made in adolescents and emerging adults, and to describe some career development interventions (education and counselling) designed in this framework. A "self-constructing" model will be outlined. Referring to the constructivist and social constructionist epistemologies, this approach to identity construction describes self-construction as a dynamic system of (past, present and anticipated) subjective identity forms (SIF). A SIF is defined as sets of ways of being, acting and interacting in relation to a certain view of oneself in a given context. The synthesis and the dynamism of this system originate in a tension between two kinds of reflexivity anchored in certain views of self in the future. The first one is a stabilizing factor (a wanting to become like this person or persona, opposed to a rejection of others). The second kind of reflexivity is a sense-making process during which individuals reflect upon the multiple possible interpretations of their past and present commitments and those they anticipate. It leads towards a never-ending self-analysis. Empirical observations made with adolescents and emerging adults show the construction and deconstruction processes of their self-anticipations in vocational figures as well as the development of some meta-reflexion processes involved in the second kind of reflexivity. Interventions methods aim to help people develop a critical sense of self, anchored in some flexible self-anticipations, that allow them to either see and grasp certain opportunities afforded by the different settings where they interact or create new ones. Such a constructivist/constructionist approach seems promising in the fields of both research and interventions. Nevertheless these

interventions are (to name them in Foucault's words) technologies of the self aiming at the government of self. Is such an aim sufficient to help people cope with the world's crises we have been experiencing over the last few decades?

Keywords: *identity, career development, self-constructing model, reflexivity, interventions*

Creating a research agenda in career counselling: The place of action theory

YOUNG, R. (University of British Columbia),
DOMENE, J. (University of New Brunswick)

The purpose of this presentation is to introduce a conceptual model and research method as the basis for a research agenda in career counselling. While there is substantial research literature in the career field generally, there has been relatively little focus on the career counselling process. The perennial problem of the separation of research and practice may be one contributing factor to this dearth. Building on a systematic review of the literature in career counselling and related areas, we identify salient current issues in the discipline, and frame these issues from the action theoretical perspective to formulate the research agenda. The method also involves a review of the existing literature on action theory and its associated action-project research method. Results of the review reveal that, for over a decade, contextual action theory has been put forward and used as a framework for research in the career field as well as for general counselling practice. A corresponding research method, the action-project method has been developed and used. However, it has only recently been applied to research on the career counselling process. The advantages of using contextual action theory for this purpose include its conceptual basis, its sophisticated qualitative and quantitative research method, and the significant link it provides between research and practice. In this presentation we address how contextual action theory and the action-project method are advantageous in addressing the major issues in the career counselling field, for example, the place of emotion and the use of narrative, and propose a specific agenda to address them.

Keywords: *career counselling, action-project method, contextual action theory, counselling, career*

'Telling tales': Do narrative approaches for career counselling count?

REID, H. (Canterbury Christ Church University)

The aim of the paper will be to question the usefulness of using narrative approaches to career counselling. By drawing on a current research project (developed by the author and a colleague, Dr Linden West) the paper will argue for the importance of narrative and autobiographical-based approaches in career and educational counselling. The development of such work provides an opportunity to offer a more meaningful, ethical and sustainable approach to career counselling – for all involved. However, the paper will also discuss the wisdom of 'mining' from therapeutic counselling and using such techniques within an eclectic approach to career counselling. The research is autobiographical, working collaboratively with a group of eight practitioners to develop approaches and then to apply and evaluate techniques and strategies within the context of their work. This is a work in progress, but initial analysis of the work with clients has highlighted the potential usefulness of the approach, but has indicated a number of epistemological and political tensions derived from the working culture of career and educational counsellors (and researchers) in the UK. The paper will raise these affective issues for discussion. The analysis has confirmed the power of narrative approaches to help clients construct ideas about self and career futures in ways that are more personally meaningful. But it is hard work for practitioners and not all of the group have continued to use a new approach – why? The research is now in its second phase; where the autobiographical resonances of the work are being explored. Findings will be discussed.

Keywords: *career counselling, narrative approaches, educational counselling, therapeutic counselling, autobiographical-based approaches*

A story telling approach to career counselling: Key constructs examined

MCMAHON, M. (The University of Queensland),
WATSON, M. (Nelson Mandela Metropolitan
University)

Despite the intuitive appeal and increasing influence of constructivist approaches to career counselling, the 'how to' of implementing such approaches is not well understood. The aim of the paper is to examine how the constructs of reflection, connectedness, meaning making, learning and agency are operationalised in a constructivist approach to career counselling, specifically the story telling approach. Theoretically guided by systems theory and the story telling approach to career counselling, a series of career counselling interviews was conducted with Black South African women. Interviews were recorded and transcribed. A coding system based on the constructs of reflection, connectedness, meaning making, learning and agency was specifically developed for the research project and facilitated thematic analysis of the interviews. A detailed description of the development of the coding system will be provided. The results provide examples of a) how career counsellors enact the constructs of reflection, connectedness, meaning making, learning and agency and facilitate the development of these constructs in their clients, and b) how clients operationalise these constructs in their dialogue with career counsellors and in their actions. Illustrative examples of client dialogue, counsellor dialogue and interview process are provided. The results also provide some evidence of the cross-cultural applicability of constructivist approaches to career counselling. The study provides insight into the conduct of career counselling informed by constructivism from which tentative suggestions about facilitating the constructs of reflection, connectedness, meaning making, learning and agency may be made. Such suggestions may be of practical use to practitioners and counsellor educators interested in using and promoting constructivist approaches to career counselling.

Keywords: career counselling, story telling approach, systems theory, reflection, thematic analysis

Contemporary use of simulation in road safety - Part 1

Chair(s): LENNÉ, M. (Monash University Accident
Research Centre)

Discussant(s): SUMMALA, H. (University of Helsinki)

With advances in technology simulators have become more affordable and are being used by an increasing number of researchers worldwide. This double symposium will showcase a sample of the latest experimental research that uses driving simulation. The topics proposed will provide ICAP attendees with knowledge on key principles of simulation research with practical examples. For example, key issues of scenario design and performance measurement, including the analysis of eye movements, are core themes across the presentations. The presenters are recognised as international leaders in simulation research, and the program assembled draws upon experts from Australia, Canada, Finland, Sweden, France, New Zealand and the UK.

Five practical and useful questions about driving simulation

CAIRD, J. K. (University of Calgary), HORREY, W.
(Liberty Mutual Research Institute for Safety)

A number of common practical questions or concerns are frequently expressed about driving simulators. Probably the most important question though is whether driver behavior in a simulator mimics that which is exhibited while driving in the real world. This and four other epistemological questions will be discussed. Research synthesis and analytic approaches are used to address each of the five questions: 1) What are the origins of driving simulation? 2) When using driving simulators, what special considerations should be discussed when applying to an ethics committee or institutional review board (IRB)? 3) What dependent variables can be collected using a driving simulator? 4) To what degree are the results from a simulator similar to

those measured in the real world? 5) How well do the results from simulator, on-road and more basic laboratory studies correspond with one another? The results showed: 1) The earliest citation of a system that resembled simulated driving appeared in the journal *The Human Factor* in 1934 (Miles & Vincent); 2) A typical list of issues that needs to be addressed when an ethics application is submitted includes: informed consent, consent to use participant image, negative transfer, simulator sickness, parental consent (if needed), screening criteria, recruiting procedures, questionnaires, experimental script or verbal protocol, payment, and debriefing; 3) The choice of dependent variables is made based on the questions being asked; 4) This multi-level correspondence problem has broadly been called simulation validation, which has been defined as the replication of simulator and on-road tests to determine the extent that measures correspond across contexts; and 5) A number of recent studies have sought to statistically compare results arising from different methods, which are discussed. How simulators are used by researchers can result in high quality research or results that are open to criticism. Threats to internal and external validity in driving simulation can, in part, be addressed by attention to a number of methodological details. Future research with driving simulators should make a difference and address important gaps in knowledge such as understanding why and how drivers are killed and injured and determining if safety countermeasures are effective.

Keywords: *driving simulation, simulators, ethics*

Examining the potential of modern driving simulation for enhancing human performance research

TRIGGS, T. (Monash University Accident Research Centre), LENNÉ, M. (Monash University Accident Research Centre)

Over the last forty years there has been an explosion of capability in the technical aspects of driving simulation. As a consequence, the use of simulation in human factors studies has become widespread. Investigators have used the enhanced capabilities to conduct studies in a wide range of driving environments and

scenarios while collecting data for a range of dependent variables. While much excellent work has been done, the issue remains as to whether driving simulation research has contributed substantially in new ways to human factors psychology. While simulation has been used to study performance in operational environments, it can be argued that much of the work that has been done has used simulation basically as an extension of the traditional experimental psychology laboratory. Does simulation provide a special opportunity for furthering human performance theory? In addressing this question here, we will consider how simulation might be used to promote such development. An overview will be provided of the progress that has been achieved in terms of theoretical development as opposed to the answering of applied issues from the use of simulation. As highlighted by Norman Anderson, the areas of theory and measurement are closely intertwined, so we will then consider how the use of a range of measures can contribute to basic theory questions. Concepts developed by Egon Brunswick, bearing on ecological validity and representative design, are relevant to the fact that simulation potentially allows flexibility in human performance. Meaningful removal of constraints on human performance is made possible by the use of simulation. Such considerations also bear on the question of how the level of simulation realism available can affect the type of research issue that can be explored. It will be argued that further developments in human factors methodology are needed to better exploit the true capability of modern simulation. Important issues here are task requirements, databases/scenarios, experimental measures, data analysis techniques, and procedures for integrating the outputs from various measures. Additionally, we will identify some modelling areas that are likely to benefit from the use of simulation. Areas to be considered will include trade-offs models, resource theory, expectancy theory and calibration.

Keywords: *driving simulation, human performance, research*

Hazard perception by road and by simulator

UNDERWOOD, G. (University of Nottingham),
CRUNDALL, D. (University of Nottingham),
CHAPMAN, P. (University of Nottingham)

How should we assess the comparability of driving on a road and “driving” in a simulator? If similar patterns of behaviour are observed, with similar differences between individuals, then we can conclude that driving in the simulator will deliver representative results and the advantages of simulators (controlled environments, hazardous situations) can be appreciated. In the present study we compare hazard detection while driving on roads, while watching short film clips recorded from a vehicle moving through traffic, and while driving through a simulated city in a fully instrumented simulator with a 90 degree forward view (plus mirrors) that is under the speed/direction control of the driver. In all three tasks the primary measures of visual attention involved the recording of drivers’ eye movements, and of particular interest were differences in scanning and hazard detection between drivers with differing amounts of experience. On real roads it is not possible to create sudden hazards for clear ethical reasons, and so we relied on the extent of visual scanning as a measure of hazard detection. The rationale here is that drivers who are looking around them are looking for events to which they may have to respond. The laboratory method with video clips has been well documented elsewhere, and involves the detection of hazardous events in short movie clips recorded from a vehicle moving through traffic. A hazard is defined here as any event on the roadway that would cause a driver to take evasive action, including changing direction or braking. The responses to these movies are now part of the driver testing and licensing process in a number of countries, including the UK. In a simulated environment hazards can be introduced that correspond to those filmed for the hazard detection task, with other (simulated) road users changing direction suddenly, or moving into the path of the driver. In all three situations we find increased scanning by more experienced and especially professional drivers, and earlier eye fixations on hazardous objects for experienced drivers. This comparability encourages the use of simulators in drivers training and testing.

Keywords: *hazard perception, road simulator*

Driving simulators in product development and assessment

NILSON, L. (VTI)

ViP (Virtual Prototyping and Assessment by Simulation; www.vipsimulation.se) is a Swedish centre of excellence for development and application of driving simulator methodology focusing on the interaction between humans and technology (HMI). The centre aims at establishing a national platform for extended co-operation, competence development and knowledge transfer in the field of real-time simulation of vehicles and infrastructure. Collaboration with national and international actors outside the centre is foreseen. The goal is to be one decade in advance, to explore and develop future vehicles and traffic environments by today enabling the study of real drivers driving future vehicles in future traffic using simulated vehicles and a virtual surrounding world. To reach more prospective and efficient (costs, lead times) innovation, product development and assessment by driving simulators, as well as to keep Sweden in the international front-edge, ViP combines three approaches: (1) Co-ordination and development of a common technical framework for driving simulators (hard and software modules, interfaces, protocols, models; compatibility); (2) Development and use of a common simulator-based methodology framework (methods, procedures, indicators, analysis); (3) Concrete applications (projects) as basic activities. The integration of technical/methodology development and application is realised through mutual and iterative exchange of knowledge and experiences. Today 17 projects are ongoing within ViP and the 12 partners represent vehicle manufacturers, road administration, SME, and the research community.

Keywords: *driving simulation, innovation, humans and technology*

Putting training in motion: The importance of motion fidelity for simulation-based vehicle operator and crew training in the military

SALMON, P. (Monash University Accident Research Centre), LENNÉ, M. (Monash University Accident Research Centre), TRIGGS, T. (Monash University Accident Research Centre)

Motion fidelity refers to the extent to which any motion-induced forces experienced in the training environment reflect those experienced in the actual environment. The importance of providing motion within simulation-based driver and co-driver training remains a moot issue, with the literature available being both vague and dated. Notwithstanding this, recent research has identified motion fidelity as a fundamental training system design issue in the context of military vehicle operator and crew training. The aim of this research was to explore the importance of providing high levels of motion fidelity in the context of military simulation-based land combat vehicle operator and crew battle management system training. The Monash University Accident Research Centre's (MUARC) advanced driving simulator was used to conduct an experiment focusing on the effects of motion on the use of in-vehicle battle management systems during driving tasks. Participant teams, consisting of drivers and co-drivers, completed two drives, one with a high degree of motion fidelity and one without motion, whilst undertaking a route planning and navigation task. Driving performance, teamwork, workload and task performance measures were taken. The results will be discussed in detail in the full conference paper; however, preliminary findings suggest that, in the context of military training at least, motion fidelity is likely to be a key consideration in training system design. Whilst the majority of the literature available is skeptical regarding the benefits of motion fidelity over and above enhanced physical fidelity, this research indicates that, if motion is a cue required to perform a particular task, then careful consideration must be given to implementing high motion fidelity within the training system itself.

Keywords: *motion fidelity, military, simulation, training*

Contemporary use of simulation in road safety - Part 2

Chair(s): LENNÉ, M. (Monash University Accident Research Centre)

Discussant(s): SUMMALA, H. (University of Helsinki)

With advances in technology simulators have become more affordable and are being used by an increasing number of researchers worldwide. This double symposium will showcase a sample of the latest experimental research that uses driving simulation. The topics proposed will provide ICAP attendees with knowledge on key principles of simulation research with practical examples. For example, key issues of scenario design and performance measurement, including the analysis of eye movements, are core themes across the presentations. The presenters are recognised as international leaders in simulation research, and the program assembled draws upon experts from Australia, Canada, Finland, Sweden, France, New Zealand and the UK.

User-centred design for a 'smart' driving advisor: the role of simulation in the design process

YOUNG, M. S. (Human-Centred Design Institute, Brunel University), BIRRELL, S. A. (Human-Centred Design Institute, Brunel University)

'Foot-LITE' is a UK project aimed at developing a system to encourage 'smart' – that is safe and environmentally friendly – driving behaviours. Clearly, the ergonomics of the human-machine interface is crucial to achieving the desired behavioural changes while avoiding any negative impacts of distraction. A human-centred design process has been adopted to develop and test the interface design through a combination of rapid prototyping studies, simulator experiments, instrumented vehicle testing, and field trials. In this paper, we present the results of a simulator experiment which evaluated two interface options with respect to their effects

on driver performance. Two candidate interface designs had already been developed based on established ergonomics techniques and best practice. These were installed and linked up with the Brunel University Driving Simulator to provide dynamic driving feedback, using outputs from the simulator's real-time data stream. Combined with a baseline driving condition, there were three levels of the independent variable for interface design (none, interface 1, interface 2). A second independent variable examined road type, with two levels: urban and extra-urban. Twenty-five participants drove each of these conditions in a counterbalanced repeated-measures design. Dependent variables covered objective measures of driving performance and workload, and subjective metrics of usability and mental workload. There were mixed results in terms of choosing between the interface designs. Some of the objective data favoured interface 1, in terms of the desired driving behaviours. Factors such as the number of excessive acceleration events and speeding violations were reduced for interface 1. But closer inspection of the data suggests these results are not so clear-cut. Meanwhile, a secondary task to measure objective mental workload revealed that interface 2 was least demanding, and this finding was echoed in the subjective workload data. Subjective usability ratings also favoured interface 2. It was difficult to be conclusive about which interface design was preferred based on the results of this study. However, since the simulator experiments were intended to be a filtering stage in the wider human-centred design process, a choice was made based on the workload and subjective data in favour of interface 2. This choice was justified on the basis that both interfaces in fact demonstrated superior performance over baseline driving, and that one of our key objectives was to minimise driver distraction from the display. Although the on-road trials are yet to occur at the time of writing, the paper will discuss the role of the simulator tests in the wider context of the project.

Keywords: Foot-LITE, driving behaviour, distraction, driver performance

Driving without awareness: Insights into the unconscious driver

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The sense of driving without awareness is an experience familiar to most drivers; a sudden realisation that you have no recollection of the past several minutes of driving, and that you have arrived at this point in the journey with little or no conscious attention to the surrounding traffic. As with many other areas of skilled performance, most aspects of driving become automated with practice. While the role of automaticity in skilled performance has been of interest to experimental psychologists for many years, little is known about the progression of automatisation in driving tasks, and the timing and frequency with which drivers switch their attention between operating and monitoring processes. This research examined the development and maintenance of automatic driving habits in a high-fidelity driving simulator by maintaining a cohort of participants paid to drive a simulated road regularly over 12 weeks of testing. The simulated road created for this study was a 24 km-long section of rural road based on the surveyed 3-dimensional road geometry of a two-lane state highway in New Zealand. During each session, participants took two "trips" on the simulated road; sometimes travelling on a "to and from" journey on one half of the road, sometimes traversing the entire road in one direction. A range of measures, including driving performance, detection task performance, and eye-blink rate, were collected over the course of 24 sessions. The data show the development of stereotyped action patterns and declines in object detection performance indicative of proceduralised "driving without awareness". This longitudinal research paradigm is a significant departure from previous studies, which have only examined drivers in a conscious (top-down) attentional mode using short, hour-long experimental sessions or cross-sectional designs comparing expert and novice performance. The changes in attentional focus and driving performance over time provide new light on a range of previous research findings and have prompted us to critically re-examine several established models of driving behaviour including the Risk

Homeostasis, Task Capability, Zero Risk, and Hierarchical Task models.

Keywords: *driving, automatic driving, conscious attention, driving performance*

Training non-technical skills in young driver teams: Training program development and simulator-based evaluation

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Communication-based training programs have proven to enhance team performance in many settings, but have not yet been tested in a road safety setting. The purpose of the present study was to evaluate a pilot program to teach communication skills to young drivers and passengers. Data were collected from 62 young male drivers. Half of the participants were randomly allocated to attend a two-hour training session. The trained group participated in a two-hour facilitated discussion session, which was led by experienced facilitators. The training session emphasised ideas such as the risks involved in driving, the responsibilities of drivers and passengers, and various strategies for effective communication in a vehicle. In the simulator, participants were tested in pairs (all pairs were friends). Trained participants drove more safely in the simulator as measured by speed and reaction times to detect hazardous events. Trained groups also exhibited more safe communication than did untrained participants. There were also differences in real-world driving behaviour, as revealed by use of the Driver Behaviour Questionnaire developed by James Reason. In particular, a greater number of trained participants reported reductions in the frequency of mistakes and violations. The present results reveal an alternative view of adolescent passengers: rather than being a negative influence on drivers, adolescent passengers may be trained to become a positive influence. Nonetheless, the present results do not diminish the importance of continued

supervision of young drivers, including the enforcement of passenger restrictions.

Keywords: *training programs, team performance, road safety, communication, adolescents*

Simulation research for Powered Two Wheelers (PTW): Research challenges and progress

ESPIÉ, S. (INRETS)

Current statistics show that Powered Two Wheeler (PTW) users are over-involved in fatal crashes. The risk to be killed in an accident is about 24 times higher using a PTW than using a car. The disproportionately high rate of motorcycle-related deaths and injuries stems primarily from riders' and drivers' errors. While car driver behaviour has been studied in depth for more than 20 years, very few efforts have been made for PTW riders. Understanding the motives that underlie PTW riders' decision process is, however, the basis for designing relevant and efficient countermeasures. Despite their numerous limitations car driving simulators are now commonly used to investigate driver behaviours. Used carefully, and by researchers aware of the limits of the technology and of the question of the transferability of data acquired using this tool, driving simulators are quite relevant. There is now a market for car driving simulators, and several companies sell "off the shelf" products. PTW riding simulation is much more challenging and less advanced than car driving simulation. The dynamics are more complex, and contact with external elements such as wind and rain is fairly impossible to recreate. There are still very few riding simulator prototypes and they each have a limited domain of validity. At INRETS we conduct research on a PTW riding simulator prototype dedicated to PTW riders' behaviours. This prototype is enhanced iteratively and used for studies. In this paper we will first present information on existing riding simulators. We will then describe the INRETS PTW riding simulator and its current status. We will then discuss its use to study various IVIS systems within the framework of a European research project. Finally, we will discuss the future of such a tool and the way we plan to use what

we learned designing this prototype to design next generations of PTW riding simulators.

Keywords: *crashes, motorcycle, simulators, research project, driving*

Counselling international students: New directions for practice and research

Chair(s): ARTHUR, N. (University of Calgary)

Discussant(s): MCMAHON, M. (Queensland University)

The mobility of students between nations provides unprecedented opportunities for academic and cultural learning. Counsellors need to be informed about international student transitions and be prepared to deliver relevant interventions. In this symposium, we intend to expand dialogue about the nature and scope of international student transitions, and emphasize theoretical perspectives that inform both research and practice. This symposium will target the following learning objectives: (1) Examine key aspects of international student transition experiences; (2) Review concepts that counsellors may use to understand and appreciate the nuances of international students' transition experiences; (3) Present original research and a synthesis of research perspectives evident in the literature; (4) Outline guidelines for strengthening counselling approaches to service provision; and (5) Provide recommendations and directions for future research. The first presenter will provide an overview of the research pertaining to counselling international students. This presentation will identify gaps in the literature related to the client, the therapist, the process, and the outcome. The first presenter will also highlight selected concepts for understanding three phases of international student transitions. In the second paper, the presenter will discuss original research on international student successes and failures. Her emphasis on interpersonal relations will demonstrate the integral connections between the academic and social realms of international student experiences. The third paper focuses on the latter stage of cross-cultural transition and re-entry. The presenter will provide a synthesis of research on the re-entry transition, to illustrate the state of our current knowledge, and the

implications for counselling international students. The fourth paper focuses on the transition from university to employment and permanent immigration in the host country. The presenter will describe influences on international students' career development, including perceived barriers and facilitators in the decision-making process. The symposium brings together five experts who are working in four different countries. The papers together will provide a forum for advancing knowledge about international student transition experiences. The presenters will emphasize the implications for counselling international students and provide suggestions for future research.

Counselling and psychotherapy with international students: What do we know? What do we need to know?

LEONG, F. (Michigan State University)

As international sojourners, many international students in the United States experience a whole range of adjustment problems including culture shock, language problems, isolation and loneliness of living in a strange country for extended periods. The purpose of the current paper is to provide a critical review of the literature related to counselling and psychotherapy with international students from two perspectives: (a) What do we know? (b) What do we need to know? By addressing the first question, guidelines will be suggested about counselling and psychotherapy with international students who are experiencing such psychological problems. A review of the literature on counselling international students will be based on the framework developed by Bergin and Garfield (1994) in their classic *Handbook of Psychotherapy and Behavior Change* with their four components: the client, the therapist, the process, and the outcome. In using this framework, we will be discussing the client variables with regards to counseling international students, the therapist variables, and we have combined the process and outcome variables into one section since they are highly interrelated. The second question is aimed at identifying potential directions for future research. While there are many important gaps in our knowledge-base on counseling and psychotherapy with

international students, for the current paper I will cover only three specific dimensions that I personally think are promising directions and covers different phases of their sojourn: (a) Exploring how Leung and Bond's program of research on Social Axioms may help us understand the psychological problems experienced by international students in the United States in the early phases of their sojourn since these are the cultural beliefs that they have brought with them, (b) Using Michele Gelfand's research on situational constraints (i.e., tight vs loose cultures) to understand the adjustment problems of international students in the middle phase of their sojourn, and (c) Applying John Berry's acculturation model to understanding and helping international students and scholars with their re-entry adjustment upon return home.

Keywords: *students, psychotherapy, culture, counselling, beliefs*

A relational perspective of international student successes and failures

POPADIUK, N. (Simon Fraser University)

In this study, I examined (a) unsuccessful international students who were required to withdraw from a Canadian university, and (b) successful international student alumni who successfully navigated their Canadian university and post-graduation careers. Given the importance of relational issues highlighted, but not explored in quantitative studies in the field, this in-depth interpretive study attempted to better understand the nature of interpersonal relationships and how they impacted international student transitions. I used Relational-Cultural Theory to underpin this work as a way of conceptualizing how relational connections and disconnections might be implicated in students' emotional well-being and academic success. Given that only a handful of feminist studies exist in this field, I used the Feminist Biographical Method to explore international student narratives of their difficulties and failure, as well as their strengths and successes. I conducted semi-structured interviews with current university students and alumni who fit the inclusion criteria for the study from a Western Canadian

university. I analyzed the results by using thematic coding and a feminist lens to focus on issues of diversity, power, and privilege (e.g. gender, ethnicity, social class, sexual orientation). Results demonstrated that the nature and quality of interpersonal relationships in the home and host countries strongly influenced international student transition, adjustment, and decision-making post-graduation. When students were able to feel connected to others, when they felt supported and cared for, and when they knew that they were important and mattered to others, they reported being able to face life's challenges, find a way out of a negative downward spiral, and experience a sense of emotional health and well-being. On the other hand, when students felt disconnected from others in the home and/or host countries, they reported feeling alienated, marginalized, and psychologically vulnerable, which often led to feelings of anxiety and depression. Positive and negative experiences with others influenced international student well-being, which often directly impacted their studies and ability to succeed. Understanding the contextualized and nuanced accounts of international students' relational connections and disconnections can help counsellors, advisors, and researchers conceptualize transition and adjustment issues from a holistic, meaningful, and in-depth perspective.

Keywords: international students, relational-cultural theory, interpersonal relationships

Counselling international students: Re-entry, re-acculturation, and life re-alignment

LEUNG, A. (The Chinese University of Hong Kong)

This presentation aims to accomplish four objectives. First, theoretical and empirical work related to the re-entrance of international students to their home cultures is reviewed. A number of conceptual perspectives are examined and discussed, including cultural value conflicts perspective, stage perspective, and acculturation perspective. Second, counselling interventions to prepare and facilitate the re-entrance of international students to their home countries are discussed. These intervention strategies would

be classified into (a) information (e.g., provide information about re-entry difficulties), (b) psycho-educational (e.g., engage returning international students in a short course to help them learn about re-entry), (c) role model, mentoring and interpersonal support (e.g., help students connect with mentors in home culture), and (d) group and individual counseling (e.g., support group for international students who are planning to return to home culture). Third, core cultural, professional, and individual-identity issues that are salient to the personal and professional development of returning international students are discussed. Fourth, directions for future research and theoretical work on the re-entry of international students to their home cultures are proposed and examined. The literature related to the re-entry of international students to home culture is reviewed. The literature will be organized, synthesized, and presented systematically in this presentation. This presentation is not based on one empirical research study, but results from relevant empirical studies are examined and reviewed. Efforts are made to include literature from diverse locations so that diverse perspectives, voices, and findings are synthesized. Several conclusions are drawn: (a) international students returning home are often confronted with an array of issues, some of them are some-what unanticipated, including their occurrence and severity. Second, diverse theoretical perspectives allow counsellors and clients to understand the complexity of issues they faced and to identify client's areas of growth and development, c) counselling intervention as developmental and preventive measures are often helpful to returning students, and (d) the transition is very challenging but many students become more mature in the process and are able to move toward a higher level of functioning personally and professionally.

Keywords: international students, cultural value conflicts, culture, acculturation, counselling

Career planning influences of international students who pursue employment and permanent immigration

ARTHUR, N. (University of Calgary)

There is limited literature on the career development of international students. International students have traditionally been viewed as temporary sojourners who live and learn in another country and then return home. Changing immigration policy in Canada and in several other countries recasts the view of international students as highly desirable human capital and a source of skilled labour. With shifting immigration policies to attract more international students, this study sought to include the perspectives of international students who are completing their studies as temporary immigrants and who are embarking on the career journey of employment and permanent immigration. The intent of the research is to determine key influences on their career decisions, and the types of formal and informal support systems that enhance their success in securing employment and implementing plans for permanent immigration to Canada. This research project examined the career planning experiences of international students at one university in Western Canada who are making the transition from school to full-time employment in Canada. The main question that was explored through this research follows: What are the key influences that international students perceive to be facilitators or barriers to pursuing employment and permanent immigration to Canada? To pilot this research, an on-line survey was developed to focus on key influences and to test this medium as a way of collecting critical incidents from international students regarding their career transition experiences. In-depth interviews were also conducted with individual international students to gain more details regarding the influences on their career planning and decision-making. The results from this study suggest that the career development needs of international students are integrally related to cultural influences from their home countries but also to the perceived barriers and opportunities in the host country. Influences on their career decision-making often pose strong challenges for students in reconciling perceived conflicts of values, relationships, and employment opportunities. Although many international students wish to remain in the host country, their decisions are confounded by cultural influences that often

lead to a complex and difficult process for students. Changing immigration policy requires a corresponding shift in policies pertaining to institutional programs and services in higher education, and in institutional linkages with employers. Comprehensive career counselling approaches are required to addressing the career development needs of international students, including the option to work and live in the host country following graduation. Implications for counselling and future research will be summarized.

Keywords: international students, career development, immigration, cultural influences, career counselling

Counselling psychology: Voices across the Pacific

Chair(s): DENHAM, G. (La Trobe University)

Counseling psychology is a specialist scope of practice in Australia and across the globe. However, like any specialty, counseling psychology takes on particular forms and appearances in different locations, and what binds us together and what marks us out as being different is part of an ongoing dialogue. This symposium compares and contrasts the contemporary practice of counseling psychology in three countries straddling the Pacific Ocean, Australia, New Zealand and the US. That distinctive forms of our practice occur in different locations says something about our commitment to dialogue and relationship and our refusal to adopt a 'one size fits all approach', among other things. The papers in this symposium examine the recent activities and professional identities of those engaged in counseling psychology in the US, New Zealand and Australia, and looks for confluences in the streams and currents in counseling psychology in these regions. Learning Objectives include: Introduce contemporary counseling psychology teaching practice in three countries, the US, Australia and Aotearoa, NZ.

Counseling Psychology in the United States: Challenges for a mature sub-discipline

HEPPNER, P. (University of Missouri)

The aim of this presentation is two-fold: (a) to briefly describe the maturation of counseling psychology in the United States, and (b) to discuss past and most importantly current challenges that have affected our development. The presentation will be informed by the author's thirty years within Counseling Psychology as a: researcher, educator, editor (The Counseling Psychologist), and president (Society of Counseling Psychology), professional writing (chapters and books) on the history of United States

Counseling Psychology, and Series Editor of Lifelines which documented the oral history of many pioneers in counseling psychology. Many events have transpired within and outside of counseling psychology over the last 100 years, and the profession has changed in many ways, in some cases profoundly. The maturation of counseling psychology in the United States will be visually depicted from 1909-2010, highlighting major event and defining moments. The profession has not progressed in a vacuum, but rather through a range of social (e.g., Women's Rights Movement), cultural (e.g., multicultural and social justice issue), economic (e.g., the great depression), governmental policies (e.g., national defense), global forces (e.g., the shrinking of time and space), as well as national (e.g., training standards) and global professional issues (e.g., cross cultural collaboration) have shaped our profession. All historical analyses of the counseling psychology profession have revealed numerous challenges, both within the profession as well as external social forces. The presentation will discuss twelve critical challenges across four major domains: (a) within our professional associations, such as maintaining unity within a broad and varied discipline, (b) maintaining an active research and social policy agenda that addresses major societal needs, (c) integrating cultural diversity throughout our research, training and practice, and (d) developing culturally sensitive and meaningful international collaboration with the increasing shrinking of time and space. Although "we have come a long way baby", it will be concluded we have much further to go to reach our ever changing goals as the world changes rapidly around us.

Keywords: *counselling psychology, United States, cultural diversity, professional issues, training*

Counselling psychology in Australia: Present and future.

DENHAM, G. (La Trobe University)

The aim of the current study was to introduce the work in counseling psychology in Australia. In providing psychological therapy in Australia counseling psychologists have focused on the compelling empirical evidence that the therapeutic alliance predicts a much larger part

of the outcome variance than specific models or techniques of therapy. Using a range of informing models including cognitive behavioural, psychodynamic, process-oriented, family systems- to name a few, counseling psychologists in Australia have recognised the contributions made by clients to their own well-being as critical aspects of therapeutic work, and have not strayed from acknowledging the collaboration required in effective this work. A person or patient-centred focus has remained a key element in this approach, addressing the problems that a diverse range of clients present across the lifespan. In reviewing the research conducted by Australian counselling psychologists in the last ten years, the expression of the basic features of counselling psychology in this country are illustrated: challenges to the notion of the 'passive client' of psychotherapy; the importance of making the therapist visible; a process and integrationist orientation to psychotherapeutic work; a critique of the intrapsychic deficits idea; a recognition of the importance of not making the client's distress worse.

Keywords: *counselling psychology, Australia, well-being*

Keywords: *counselling psychologists, New Zealand, teaching*

Counselling psychology in Aotearoa, New Zealand?"

RODGERS, N. (University of Canterbury)

The aim of the current study was to introduce the contribution of counseling psychologists in New Zealand and the recent attempts to establish a scope of practice for counseling psychology. Examined here is the contribution of counselling psychology in New Zealand. There is no scope of practice for counselling psychology in Aotearoa at the present time, and the impact of the specialty relies on the teaching and professional work of 'imports' from overseas, in the form of counselling psychologists from Australia, South Africa, and the UK. The recent history of attempts to establish a counselling psychology scope of practice in New Zealand are outlined, and the impact of counselling psychology in New Zealand is described.

Creation and experiences of family by lesbian women, gay men, and bisexual people

Chair(s): RIGGS, D. (Flinders University)

This symposium features cutting-edge research on the creation and experiences of family by lesbian women, gay men, and bisexual people. Focusing on such diverse topics as foster care provision by lesbian women and gay men and the experiences of family of young bisexual people, and presenting findings from large studies on the lives of Australian lesbian and gay parents, this symposium represents an important opportunity for psychologists to better understand the specific needs and strengths of these populations. The findings presented in the symposium will contribute significantly to the current body of knowledge on lesbian- and gay-parented families, and will usefully extend this by introducing a further focus on the experiences of non-heterosexual youth and those young people in multiparent families. Participants can expect, through attending the symposium, to come away with a clear understanding of 1) some of the common routes to family formation used by lesbian and bisexual women, 2) the ways in which lesbian and gay parents negotiate the work/life balance within their families, and 3) how bisexual young people and those in multiparent families negotiate their families. This information will be highly useful for practitioners working with non-heterosexual families, both by recognizing the challenges that they face living in a heteronormative society, and the resistances and resiliences they display in the face of this.

Experiences of Australian lesbian and gay foster carers and those who work with them

RIGGS, D. (Flinders University)

While a growing number of Australian foster care agencies actively recruit lesbians and gay men as potential foster carers, few agencies

have guidelines for working with this population. Similarly, whilst there is a growing body of research on the experiences of Australian lesbian and gay parents, little of this research has focused on the experiences of lesbian and gay foster parents. The research project reported here sought to address these two shortfalls in existing research and practice by exploring the support needs and experiences of lesbian and gay foster carers and those who work with them. Interviews and focus groups were conducted with lesbian and gay foster carers and the agency workers who support them across four Australian states. A survey was also designed for each group (workers and carers) to elicit both basic demographic information and opinions on a range of topics related to support and care provision. Survey data were analysed using non-parametric methods to ascertain differences between the two groups and also differences within the groups across states. Interview and focus group data were analysed using thematic analysis. Findings suggest that support experienced by lesbian and gay carers was largely restricted to the 'luck' of having a good worker. Some carers felt adequately supported by foster care agencies whilst others found the foster care system in general to be antagonistic and homophobic. Agency workers reported overall a relative lack of information or training in working with lesbian and gay carers. Awareness of existing guidelines or policies amongst both carers and workers was patchy, and the utility of the guidelines for increasing support for both groups was considered limited. Whilst guidelines are essential for providing a policy framework for working with lesbian and gay foster carers which protects their wellbeing, agencies need to go beyond the production of guidelines so as to 1) challenge heteronormativity, 2) move beyond a liberal inclusive model, and 3) recognize the broader social contexts in which both carers and agency workers operate, which function to constrain the lives of lesbian and gay carers and the children in their care.

Keywords: *foster carers, lesbian, gay, guidelines*

Gay and lesbian parents 'do work/family balance'

BROWN, R. (Deakin University)

This research aimed to critically examine same-sex parents' egalitarian ethic and practices underpinning the arrangements they make in balancing work and childcare commitments, and to better understand actual and ideal choices underlying work and family arrangements. A population of 460 Australian and New Zealand same-sex parents, including those who identified as gay male ($n = 66$) and lesbian ($n = 341$) parents responded to a self-report questionnaire administered in an online (electronic) format. The survey contained over 100 items, some with Likert scales and some open-ended questions that required thematic coding. The findings presented here are based on 419 participants' responses to open-ended questions asking: Can you describe the way in which you organise paid work and childcare commitments in your family?; Can you describe the reasons why your family organises work and childcare commitments in this way?; and What would be the ideal situation for you regarding the organisation of work and childcare commitments in your family? Around half of all reasons offered were directly related to the desire to maximise time with children. One in four reasons cited were pragmatic grounds such as financial need, earning potential and availability of government pensions for choices behind which parent worked longer hours in paid labour and who would devote more time to childcare. Only 15% of reasons included the intrinsic value and pleasure in work as a reason underpinning arrangements. The major motivation underlying work/family arrangements lay not solely in egalitarianism *per se*, but relied on a depth of ingenuity around making arrangements that enhanced — for *each* parent if they were in partnership, and for sole parents too — their opportunities to spend time with their children. A desire to each maximise time with their children was the significant motivator and the significant ideal behind these parents' attempts to achieve work/family balance in their daily lives. It was noteworthy too that one-third of all same-sex parents in the study reported that the balance they had created between work and family was actually already ideal.

Keywords: *same-sex parents, lesbian, gay, work-life balance*

Border sexualities, border families

PALLOTTA-CHIAROLLI, M. (Deakin University)

School policies, curricula and student/family welfare systems, particularly in relation to health and sexuality education, are increasingly affirming and supporting gay and lesbian students, and gay and lesbian families. Yet despite this, there appears to be minimal acknowledgment and few social and mental health strategies which call for sexual and family diversity to be recognised in relation to students and families beyond and on the borders between the gay/straight divide, and beyond and on the borders of the monogamous heterosexual or homosexual couple framework. Framed by queer, social deconstructionist, post-colonial and feminist theories of gender, sexuality, health, and education, this paper reports qualitative research conducted between 2000 and 2007 in Australia and the United States with 100 individuals who identified as bisexual students or as members of multisexual, polyamorous or multipartnered families. Findings suggest that these groups employ three main strategies in order to manage their location 'at the borders': 1) passing or normalization and assimilation in school settings; 2) bordering or negotiation and navigation between the private world of home and public world of school; and 3) polluting or non-compliance and resistance, thereby outing their sexualities and families within the school world. Recommendations for policies, pedagogy and pastoral care are discussed as well as presenting the strategies these 'border sexualities' and 'border families' use in order to minimize discrimination and harassment.

Keywords: *border sexualities, border families*

Conceiving the family: Australian lesbian women's accounts of conception decisions in relation to known and unknown sperm providers, and of relationships (or lack thereof) with these men

SHORT, L. (Victoria University)

Decisions related to the type of sperm provider (known or unknown), and the types of relationships that lesbian women and their children have with sperm providers vary. The aim of this research was to analyse aspects of the family life of lesbian women in Australia, including how the varying legal, public policy, social and discursive contexts affect and shape conception decisions, and subsequent relationships and experiences with sperm providers. The research aimed to analyse the effects of the recent significant legal changes in Australia to recognise both women in a female couple as legal parents of children conceived via assisted reproduction. Sixty-eight participants from three States and Territories of Australia were interviewed (56 lesbian mothers or intending mothers and 12 service providers or community organisers). The data were analysed using a contemporary grounded theory approach, and contextualised with analysis of legal, public policy and other documents. It was found that decisions about, and experiences of, conceiving with the assistance of sperm from a known or unknown donor, and subsequent family life, are shaped by the varying levels of legal recognition accorded to same-sex couples as parents and of access to assisted reproduction services across Australia, and the understandings and discourses about families, genetic relatedness, fatherhood, and the best interests of children that are in circulation. Considering the findings in the context of related Australian and international research further illuminated the ways in which these decisions, relationships and experiences vary across time and place, in relation to the legal, public policy, social and discursive context. A range of strategies are reported to be used by lesbian women to plan and navigate family life in relation to sperm providers, and both positive and negative experiences are common. The findings provide important information for psychologists and others who work with members of lesbian-parented families, as well as for public policy makers and legislators. It contributes to our knowledge about the diversity of family life in contemporary Australia and elsewhere, in particular in relation to the significant legislative changes to parentage that are now being made in a range of countries.

Keywords: *lesbian-parented families, sperm providers*

Cross cultural studies of children's temperament

Chair(s): DINCA, M. (Titu Maiorescu University Bucharest)

Discussant(s): OAKLAND, T. (University of Florida)

The purpose of this symposium is to discuss the results and implications of three cross-cultural studies that examine the development of children's temperament. All studies used a common instrument, Student Style Questionnaire, which is based on Jung's theory enhanced by Myers and Briggs that includes four bipolar qualities: extroversion-introversion, practical-imaginative, thinking-feeling, and organized-flexible. This symposium is the first to bring together in one forum, four research teams from Australia, South Korea, Romania, and Zimbabwe together with the author of the Student Styles Questionnaire to discuss this research. This symposium will discuss the results of studies of the development of temperament among similar age children, discuss the implication of these data in light of children's learning styles, and examine the feasibility of acquiring similar data using Rasch and Differential Item Functioning (DIF) methods. The study designs for the acquisition of these data are the same. Temperament data were acquired for 75 to 100 children at each of the following four age groups: 9-11, 12-13, 14-15, and 16-17 years; 50% were boys. Data from a comparable study of children in the United States were used as a comparison group. Children's temperament preferences from the four countries display considerable similarities as well as some difference. Australian children generally prefer extroversion to introversion styles, imaginative to practical styles, thinking to feeling styles, and organized to flexible styles. South Korean children generally express preferences for extroverted, imaginative, feeling, and flexible styles. Romanian children generally express preferences for extroverted, practical, thinking, and organized styles. Zimbabwe children generally prefer extroverted, practical, feeling, and organized style. Females generally prefer feeling styles while males

generally prefer thinking styles. Construct validation results will be discussed along with the merits of using Rasch modeling methods.

Utilising insights from research and professional practice on the Students Styles Questionnaire (SSQ) in Australia

FAULKNER, M. (La Trobe University)

Temperament qualities are often overlooked as significant influences in family and classroom life, and, in the contribution temperament can make to student learning style diversity. Teachers, parents, and school psychologists need to be more aware of temperament quality variations, and learn how to be more enabling with any student irrespective of his / her individual temperament qualities. The aim of the study was to discuss the temperament development of Australian children and youth and to discuss possible implications of the data in reference to their learning styles and other behavioral Individual case examples drawn from a study of gifted children in regional Australia also will be summarized. Data from more than 300 children and adolescents were gathered using the Student Styles Questionnaire (SSQ), with approximately equal numbers of males and females. The presentation will selectively draw on the following Australian sources: (i) Regional Australian data collected on the SSQ ($N = 308$) in 1999- 2000; (ii) Individual case examples drawn from a study of gifted children in regional Australia in 2003- 2004 ($N = 33$); (iii) Individual case examples drawn from the presenter's psychology practice; and (iv) Use of the SSQ with a year 8 classroom group (2007). The presentation will include discussion of data obtained from research and case illustrations from both research and professional practice. In general, children from Australia prefer extroversion to introversion styles, intuitive to practical styles, thinking to feeling styles, and organized to flexible styles. As expected gender differences exist on thinking-feeling and organized-flexible styles. The SSQ, for which there is a growing research base internationally, offers good diagnostic insights as part of the psycho-educational assessments of Australian children and adolescents with respect to seeking to achieve

a better interface between an individual student and his/ her school program.

Keywords: *temperament, children, Student Style Questionnaire, psycho-educational assessments, learning strategies*

Temperament styles of children in South Korea and the United States

LEE, D. H. (Pusan National University), OAKLAND, T. (University of Florida)

The purpose of this proposal is to describe temperament style preferences of South Korean children and to explore possible gender and age differences among them. The current study also compares the temperament preference of children from South Korea and the US. Some scholars believe temperament and personality must be understood in light of local culture (Triandis, 2002) while others believe personality is largely independent of cultures (McCrae & Costa, 1997). This research on South Korean children's temperament will add to this literature and may help resolve this difference in opinions. Temperament styles of 4,628 South Korean children, ages 9-17 years, are compared with those of 3,200 U.S. age peers in the light of Jung's theory of temperament as modified by Myers and Briggs. The SSQ is a self-report measure. It was found that South Korean children strongly prefer extroverted to introverted, imaginative to practical, feeling to thinking, and flexible to organized styles. In contrast to South Korean males, South Korean females are more likely to prefer extroverted, feeling, and organized styles. Age differences are seen on all four styles, with children generally expressing a greater preference for introverted, practical, feeling, and flexible styles with age. In contrast to U.S. children, South Korean children are more likely to express preferences for extroverted, imaginative, feeling, and flexible styles. These preferences also are more frequent in South Korean than U.S. males and females as well as all four age groups. Our findings regarding South Korean children are somewhat unexpected based on traditional Korean literature that generally characterizes Korean children's behavior and affect as displaying socially introverted, quiet, controlled, and withdrawn temperament

qualities. Gender differences in Korean children are generally consistent with previous literature (Bassett & Oakland, 2009; Myers, McCaulley, Quenk, & Hammer, 1998). South Korean children were more likely to prefer introverted, practical, feeling, and flexible styles as they became older. The cross-cultural findings are unexpected in light of presumed cultural differences between Korea and the U.S. (Jung & Stinnett, 2005), results from previous studies of temperament among South Korean and U.S. adults (Hammer & Mitchell, 1996).

Keywords: *temperament, children, personality, culture, South Korea*

Validating predictions for children's temperament styles

ILIESCU, D. (SNSPA University), DINCA, M. (Titu Maiorescu University)

The Student Styles Questionnaire (SSQ) (Oakland, Horton, & Glutting, 1996) is based on Jung's theory of personality types and as such bases predictions mainly on theoretical assumptions which sound logical and convincing but have up to date received little attention in terms of validation. For example, when speaking about pitfalls in the classroom, is it really more possible for Extraverts to distract other students in the classroom, or for Organized students to be anxious or to become frustrated when their schedule is being changed? A total number of 627 students (44% males) aged 14 to 18 years ($M = 16.1$, $SD = 1.3$) completed the SSQ. A teacher (usually the regular class supervisor) completed for every child a list of 83 behaviors, evaluating on a 5-point scale the probability for the respective child to engage in that specific behavior. The behavior list is compiled from predictions suggested in the SSQ Technical Manual as being typical for every one of the 8 concepts (the poles of the 4 bipolar scales) measured by the SSQ. Correlations and factor analyses show a picture of great coherence for the predictions suggested for Extraversion and Introversion, good confirmation for Flexible-Organized and a somewhat not so strong confirmation for Practical-Imaginative and Rational-Emotional. Multi-dimensional scaling suggests also other interactions between the concepts measured

and the list of classroom behaviors. The data appear to support most of the descriptions and suggestions which are recommended based on the scores of the SSQ, adding important validation information and empirical support to some of the theory-driven assumptions Jung-type temperament measures are usually based upon.

Keywords: *Student Styles Questionnaire, temperament, extraversion, personality types, Jung*

Constructing interval scale temperament style measures

MPOFU, E. (University of Sydney), OAKLAND, T. (University of Florida), MHAKA, M. (Schools Psychological Services), GWIRAYI, P. (Midlands State University)

The structure of temperament styles was investigated using Rasch and Differential Item Functioning (DIF) methods with data from 397 (46% males) early adolescents. The students completed the Student Styles Questionnaire (SSQ) (Oakland, Horton, & Glutting, 1996), a 69 item children's self-report measure of temperament styles that uses a forced choice item format. Each item was scored as a dichotomous Rasch scale variable. Principal component analysis of the standardized residuals yielded unidimensional latent temperament variables for extroversion-introversion (EI), practical-Imaginative (PM), thinking-feeling (TF), and organized-flexible (OL) styles. Higher endorsements/ were found for extraversion (E) than introversion (I) styles, for practical (P) than imaginative (M) styles, for feeling (F) than thinking (T) styles, and for organized (O) than flexible (L) styles. TF style indicators seemingly were targeted more appropriately to the Zimbabwean adolescents than were EI, OL, and PM styles. Rasch modeling methods appears to have merit when constructing and using interval scale measures of temperament styles from forced choice data.

Keywords: *temperament, adolescents, Student Styles Questionnaire, Rasch modeling, extroversion-introversion*

Cultural competence: Working with Australian Aboriginal and Torres Strait Islander People

Chair(s): DUDGEON, P. (University of Western Australia)

Discussant(s): GRIDLEY, H. (The Australian Psychological Society)

This symposium overviews the current developments, programs and issues in developing a culturally competent profession in Australian psychology. International and Australian studies have shown relationship between social disadvantage and health, including mental health. In order to improve health and wellbeing, social disadvantage and its effects, particularly among the disenfranchised needs to also be addressed. There have been widespread calls for new approaches to Indigenous mental health that identify and acknowledge the distinctive circumstances of Indigenous Australians — the resilience of Indigenous cultures; the collective experience of racism, and the disempowerment of colonisation and its legacy Traditional mainstream mental health approaches have failed Indigenous people and interventions have little understanding of their realities. Genuinely transformative approaches require Culture Competence across systems, organisations, professions and individuals. There is an urgent need for mainstream service providers who work with Indigenous people to offer services in more culturally secure and appropriate ways. This has become an important issue for psychologists working with Aboriginal and Torres Strait Islander peoples. The National Practice Standards for the Mental Health Workforce require all Australian psychologists to demonstrate an understanding of culturally appropriate assessment instruments and techniques and the way cultural issues can impact on the appropriateness of their assessment and treatment of Aboriginal and Torres Strait Islander people. As well as understanding and respecting Aboriginal and Torres Strait Islander definitions and concepts of

emotional health and wellbeing and the impact of social, cultural and linguistic factors on mental health, psychologists are expected to use language and communication styles that are culturally and linguistically sensitive and to regularly evaluate their practice in relation to cultural appropriateness in Indigenous settings. This symposium addresses cultural competence in the discipline of psychology. Presentations overview how the professional body is providing cultural competence training to practicing psychologists, examine the key dimensions of cultural competence using case studies from curriculum-based and applied research, discuss why cultural competence needs to be positioned from a space that recognizes the continuing effects of colonization; cultural difference and power. The issues and challenges that Aboriginal and Torres Strait Islander psychologists confront in the profession are also addressed.

Cultural competence workshop developed by the Australian Indigenous Psychologists Association

JONES, T. (Australian Indigenous Psychologists Association), KELLY, K. (Australian Indigenous Psychologists Association)

The National Practice Standards for the Mental Health Workforce require all Australian psychologists to demonstrate an understanding of culturally appropriate assessment instruments and techniques and the way cultural issues can impact on the appropriateness of their assessment and treatment of Aboriginal and Torres Strait Islander people. One of the goals of the newly formed Australian Indigenous Psychologists Association (AIPA) is to lead the change required to deliver equitable, accessible, sustainable, timely and culturally safe psychological care to Aboriginal and Torres Strait Islander peoples in urban, regional and remote Australia. To further this goal AIPA has developed a Cultural Competence workshop using the framework provided by the National Standards for the Mental Health Workforce. The workshop is not a general cultural awareness course. Rather, it is a specialised training designed to provide psychologists with the skills, knowledge and attitudes they need

to deliver effective and culturally competent care to Aboriginal and Torres Strait Islander people. We aim to assist psychologists to comprehend key cultural values and also to recognise the limits of their knowledge and competence. Targeting our training to meet the Aboriginal and Torres Strait Islander specific components of the National Standards for the Mental Health Workforce will not only strengthen the overall competency of non-Indigenous psychologists but will improve the accessibility and quality of care provided at every phase of the social and emotional wellbeing and mental health care continuum for Indigenous Australians, which in turn can be expected to contribute to closing the gap in mental health outcomes between Indigenous and non-Indigenous Australians. However, at the same time we recognise that on its own, culturally competent psychological care cannot—and should not be expected to—eliminate all social and emotional wellbeing and mental health disparities. To achieve this, we also need to address the key social determinants (including socioeconomic status, discrimination, employment, education and housing) that contribute to Indigenous disadvantage and psychological distress. This presentation will provide an overview of the workshops undertaken and highlight the main issues and needs arising from the project.

Keywords: Australian psychologists, Australian Indigenous Psychologists Association, mental health, well-being, discrimination

Extending cultural competence through critical praxis: What does that really mean?

WALKER, R. (Telethon Institute of Child Health Research), SONN, C. (Victoria University)

Cultural competence (CP) has been promoted as key concept for addressing health inequalities in Australia and other countries. In this presentation we overview some key dimensions of cultural competence, but warn that CP can't be an idealized end state. Using case studies, we argue that developments in critical social science can extend the notion to avoid unintended colonialisms. Central to social science work writing is the notion of power and the need to be attuned to power in

working across cultural boundaries – that is reflexivity. We draw on ethnographic data taken from case studies of curriculum-based research and applied research that aimed to promote cultural awareness and education for anti-racism. Based on these case studies we offer a framework for promoting CP that is illustrated with case data. Using the case studies we argue that cultural competence can be extended and enhanced through critical praxis. This is often a difficult and emotional process, but vital for disrupting dominant theories held about mental health, which can often result in victim blaming and other negative outcomes for Indigenous clients, families and communities. We argue that the relations between the disciplines and professions, and between those professions and Indigenous people, are part of the context that has given rise to new ways of working in ways that are empowering, respectful and ethical. In our view, cultural competency is a dynamic that is contingent and all about ensuring sensitive, just and transformative practice.

Keywords: cultural competence, Australia, power, reflexivity, critical praxis

Institutional racism within allied health practices: An Indigenous perspective.

SCHULTZ, C. (Australian Indigenous Psychologists Association)

Examining the institutionalised racism in Australian professional health and mental health practice, particularly psychological services, may be a confronting topic. However I suggest that this form of racism not only exists within our profession but that it also impacts on Indigenous Australians pursuing or continuing their careers in the field of psychology. There is an increasing demand for practitioners to become culturally competent. This has resulted from recognition that traditional western mainstream public health approaches have failed Indigenous people due to interventions having no relationship or understanding of Indigenous people's realities. As well as increasing the cultural competence of non-Indigenous psychologists, an important goal is to increase the number of Indigenous psychologists. Indigenous psychologists

themselves need to be supported and encouraged to develop culturally appropriate interventions, programs and services. This presentation will outline the challenges and issues that Indigenous psychologists confront in creating spaces that enable culturally appropriate service delivery. Stokely Carmichael coined the phrase 'Institutional racism' to explain 'the collective failure of an organization to provide an appropriate and professional service to people because of their colour, culture, or ethnic origin'. Covert racist practices within an organisation not only impact on the organisation's clientele but on its own employees. Indigenous employees within mental health services too often report not receiving 'an appropriate and professional service' from their employers. It is important for managers of such services to be culturally competent and sensitive, to ensure that Institutional racism experienced by our Aboriginal and Torres Strait Islander mental health professionals, such as psychologists, mental health workers, mental health nurses and social workers, is minimised. By limiting this form of racism in the workplace, and thus creating culturally safe and empowering spaces, we may increase the number of practicing Indigenous mental health professionals. In turn, this will increase the likelihood that Aboriginal and Torres Strait Island community members have the opportunity to access Indigenous-facilitated, focused and culturally appropriate assistance.

Keywords: racism, Indigenous Australians, psychology, cultural competence, Institutional racism

Developing cultural competence across the health sector in Western Australia

WALKER, R. (Telethon Institute of Child Health Research), DUDGEON, P. (University of Western Australia)

Research was undertaken to identify and develop appropriate cultural competence assessment tools, resources and strategies to progress maternal and infant outcomes for Aboriginal women and their families. This was done by improving communication and decision-making protocols and practices in relevant health sectors. Reviews were

undertaken about definitions of cultural competence and related concepts; existing assessment tools—their construct validity, reliability and effectiveness; and, relevant national and state policy and action frameworks. Cultural Competence assessment tools were adapted and developed in consultation with relevant stakeholders. This would ensure cultural responsive antenatal services to enhance maternal and perinatal outcomes for Aboriginal women and their babies. Two hospitals trialled the assessment tools and examined mechanisms and processes to integrate Cultural Competence into their organisational continuous improvement and professional development practice. Comprehensive qualitative interviews were held with hospital staff, Aboriginal Medical Services' practitioners and Aboriginal families further confirmed that both staff and families believe that poor communication and cultural misunderstandings impact negatively on outcomes and decisions and the overall emotional wellbeing of Aboriginal women and their families when faced with critical care needs —highlighting the need for cultural competence at all system levels. There are four dimensions of cultural competence- system, organisational, professional and individual. These dimensions interrelate so that cultural competence at an individual and organisational level is driven and motivated by systemic and organisational commitment and capacity. Integrating cultural competence into the organisation and workforce can improvements in the care and outcomes for Aboriginal families.

Keywords: cultural competence, assessment tools, communication, decision making, organisational commitment

Cultural diversity in organisations: Towards informed HR practices of recruitment and climate

Chair(s): VAN DE VIJVER, F. (University of Tilburg; North-West University), SANDAL, G. (University of Bergen)

Globalization and changing demographic patterns are making it more important for leaders to understand how to influence and manage workers with different values, beliefs, and expectations. Cultural diversity offers both potential benefits and costs for organizations. On the positive side, a greater variety of perspectives increases creativity and full utilization of a diverse workforce will increase the amount of available talents for filling important jobs. However, diversity can also result in more distrust and conflicts, lower satisfaction and higher turnover. The presentations in this symposium focus on these topics. What are the determinants of employees' trust in multicultural organizations? How do companies' approaches to managing diversity influence satisfaction and feelings of inclusiveness and belonging of minority employees? How can cultural differences in self presentation tactics among job applicants impact on the efficiency of personnel recruitment? The answers to these questions may have important implications for human resource management. The key learning objective of the symposium is to provide a better understanding of the processes that influence the outcomes of diversity at the workplace, and ethnic bias in personnel recruitment.

Personality characteristics and expressions of social trust. A survey among minority and majority members

VAN OUDENHOVEN, J. (University of Groningen)

The workplace is a major factor for integrating first and second generation immigrants and majority members. Individual factors may play an important role in creating trust at several levels, which enhances integration in organizations. The influence of a selection of key personality factors on indicators of trust is examined. Distinctions are made between employees of the majority group, and first generation and second generation minority groups. A Group of over 500 employees from three different groups (majority and first and second generation minority groups) filled out a questionnaire. Key personality characteristics are: secure attachment, self-esteem, and multicultural personality dimensions (Open-mindedness, cultural empathy, flexibility, social initiative, and emotional stability). In addition a new instrument to measure *tacit knowledge* has been developed. Dependent variables are: trust in coworkers, trust in leaders, trust in organizations, trust in society, and identification with the organization, work satisfaction, and feelings of exclusion. Comparisons between groups of employees are made via MANOVA's. In addition, multiple regression analyses within each group will establish the variance in trust measures explained by the personality measures and some demographics (gender, age and educational level). In general personality characteristics explain a considerable amount of variance in trust measures. So does educational level. Both minority groups members do not differ from majority members in their level of organization trust, but they do have lower level of trust in the society. Interestingly, second generation minority members have as much trust in their coworkers and leaders, are equally satisfied with their work, identify to the same degree with their organization, and feel equally included as majority group members. First generation minority employees, however, show lower scores on these indicators of trust. Important predictors of trust are a secure attachment, a high self-esteem and cultural empathy. Intercultural competencies are important, but, interestingly, it depends on the type of group how much variance they explain. They explain most variance in the first generation minority groups who experience most intercultural stress on a daily basis. The

tacit knowledge measure shows a large difference in perceptions of power distance: minority members are much more preoccupied about their relation with their supervisor, and are more anxious to show respect to them. The study shows a considerable impact of personality on general levels of trust of employees. Intercultural competencies are important, but their impact varies across groups. They are more important for newcomers who are more exposed to cultural differences.

Keywords: *integration, social trust, personality factors, minority groups, attachment*

Diversity in (organizational) perspective: The impact of company policy and climate on the outcomes of cultural diversity at work

VAN DER ZEE, K. (University of Groningen)

Cultural diversity at the workplace is on the increase, which is not a matter of course, as companies still are reluctant to hire minority employees. Moreover, their turnover is high. In general, minority employees feel best if they are able to identify with their organization and maintain aspects of their original culture at the same time (e.g. Van der Zee, Atsma, & Brodbeck, 2004). Based on a human need to belong, they like to be part of their organisation and the team; based on a need to be unique, they wish to bring in their original culture and be recognised for that (Brewer, 1991). However, in their policies, organizations tend to put strong pressure on cultural minorities to assimilate to the dominant culture. Negative outcomes of diversity often seem to result from this mismatch of the needs of the organisation and those of cultural minority members (Bourish, Moise, Perreault, & Senecal, 1997). In the present paper data will be presented that suggest that this mismatch may be resolved when organizations manage to adopt more colourful approaches towards diversity. Many current organizations are highly concerned not to discriminate between categories of employees and monitor and adjust their policies to ensure that this is the case. They adopt a *colour-blind approach*, stressing similarities and disregarding the relevance of cultural identities. Such an

approach fosters pressure towards assimilation. Feelings of belongingness and recognition are better served by more colourful approaches to diversity that focus on the value of diversity for example as a means to gain access to a diverse market or as a resource that provides strategic advantage to the company. Relying on the theoretical framework of Ely and Thomas (2001), data from a variety of companies will be presented showing that colourful approaches towards diversity are indeed associated with more positive organizational outcomes amidst diversity. Moreover, colourful diversity approaches stimulate an organizational climate that radiates acceptance and appreciation of diversity. Such an open climate is associated with higher work satisfaction and feelings of acknowledgment among minority employees. The implications of these findings for HRM-practice are discussed.

Keywords: *cultural diversity, minority groups, company policy, workplace climate, discrimination*

Intended self-presentation tactics in job interviews: A 10-country study

VAN DE VIJVER, F. (University of Tilburg, The Netherlands and North-West University, South Africa)

Impression management may be understood as a conscious or unconscious attempt to control the images that are conveyed in communication. It is often associated with dissimulation, including deceiving others, faking, and lying. During job interviews, self-promotion can entail entitlements (claims of responsibility for positive events), enhancements (claims that the event for which one is responsible is more positive than it is), and descriptions of how obstacles were overcome. Defensive tactics focus on repairing one's image when it has been damaged by offering excuses, apologies, or justifications. We were interested in cross-cultural differences and similarities in self-presentation tactics. Self-presentation strategies in job interviews were examined among university students in 10 countries (Germany, Ghana, Hong Kong, Iran, Italy, Malaysia, Norway, Russia, Turkey, and the U.S.A; total $N = 3,509$). The Cultural Impression Management Scale

was administered, which measures self-presentation strategies in job-oriented domains (Emphasizing Organizational Competencies and Emphasizing Individual Achievements) and relationship-oriented domains (Pointing out Obstacles and Self-Effacement). All subscales showed structural equivalence. Cross-cultural differences were larger for relationship-oriented tactics than for job-oriented tactics. Samples from less affluent and more hierarchical countries showed higher scores on all scales than samples from more affluent and less hierarchical countries, with the exception of the American sample that showed relatively high scores on all subscales. The latter is interpreted in terms of the relatively large importance attached in American culture to "selling oneself" in job interviews, whereas in countries with comparable levels of affluence, authenticity and humility are relatively more valued. Analysis of differential item functioning identified culture-specific norms regarding communication conventions such as maintaining eye contact and a proactive attitude during the interview. Results regarding these country profiles will be presented. The use of self-presentation tactics in job interviews is presumably universal; however, this universality is combined with relatively large and meaningfully patterned cross-cultural differences in mean scores. Students from less affluent countries (which typically have higher unemployment rates than more affluent countries and where jobs may be more difficult to attain) are more likely to display self-presentation tactics, notably relationship-oriented tactics.

Keywords: *self-presentation, job interviews, communication, defensive tactics, cross-cultural differences*

Making a favourable impression during job interviews: Immigrants and 'mainstreamers' self-presentation tactics

SANDAL, G. (University of Bergen)

Non-Western immigrants in Norway have an unemployment rate far above the native population and immigrants from other Western countries. One possible contributing factor is the widespread use of interviews in

hiring processes which might be biased against these groups. This study examines whether there are ethnic differences in what people evaluate to be a favourable self-presentation during job interviews. Native-born Norwegians and immigrants to Norway from four different ethnographic regions (Horn of Africa, South-East Asia, Middle-East, and Sub-Indian Continent) ($N = 1200$) were compared. Also, the intended self presentation of immigrants were compared with the judgments of Norwegian managers ($n = 436$) concerning how to make a favorable impression during job interviews. The Cultural Impression Management scale (CIM) was administered. CIM measures three self-presentation tactics: 'Emphasizing organizational competencies', 'Pointing out obstacles', and 'Emphasizing individual excellence'. The immigrant groups indicated more use of self-presentation tactics than the native Norwegians. 'Pointing out Obstacles' showed the largest difference. The magnitude of difference between immigrants and the native population was influenced by the immigrants' employment status, number of years living in Norway, length of education, and preferred acculturation strategies. Immigrants from less affluent and more hierarchical countries of origin intended to use most self-presentation tactics. While there were variations between immigrants from different countries of origin, a general tendency was that they emphasize organizational competencies less than what the Norwegian managers considered to be favourable. The results demonstrate ethnic differences in how job applicants present themselves during job interviews, and suggest that such variation may have implications for hiring decisions that could easily disfavor candidates with a minority background.

Keywords: self-presentation, job interviews, immigrants, minority groups, recruitment

Current issues in diagnosis focused on the revision of ICD- 10

Chair(s): RITCHIE, P. L. J. (University of Ottawa)

The World Health Organization (WHO) is currently developing ICD-11, scheduled for approval in 2014. The ICD is the international standard for assessment and monitoring of mortality, morbidity, and other health parameters. It exerts enormous international influence on clinical care, public health, health care education, research activity, health care administration, and health care policy. The technical work of developing the classification of mental and behavioural disorders is being led by WHO's Department of Mental Health and Substance Abuse, and is for the first time in history is being directed by a psychologist. Dr. Pierre Ritchie, symposium chair, will provide a historical account of the work with WHO on the part of organized psychology that has led to this unprecedented opportunity. Dr. Geoffrey M. Reed, WHO Senior Project Officer for the mental and behavioural disorders revision, will provide an overview of WHO perspective and work program related to the revision, and their potential implications for global psychologists. The Department is assisted in the task by an international Advisory Group, which includes several psychologists, including an official representative of the International Union of Psychological Science (IUPsyS). Dr. Ann D. Watts, IUPsyS's representative to WHO's Advisory Group, will discuss opportunities for involvement by psychologists and national psychological associations in the ICD revision process. One of WHO's key strategies for the revision is a series of systematic field studies focusing on clinical utility and global applicability. Dr. Michael C. Roberts, member of WHO's Formative Field Studies Coordinating Group, will describe this program of research and present preliminary results from a study of how international clinicians think about categories of mental disorders. Given its global mission, WHO is attentive to the key role of

culture in how mental disorders are experienced, presented, and defined. Universality of mental disorders and their symptoms is an inherent but unproven assumption of existing classifications. Dr. Rees Tapsell, a Maori psychiatrist who is working with WHO on the ICD revision on behalf of the New Zealand government, will describe a conceptual framework and program of work for addressing cultural applicability as a part of the classification.

Deception, deviance and devaluing others at work: are employees really “bad to the bone”?

Chair(s): RESTUBOG, S. L. (The Australian National University)

Discussant(s): GROTH, M. (The University of New South Wales)

This symposium consists of four papers that examine the interconnections between deviance and employee outcomes. Deviance (e.g., lying, rumour spreading) leads to negative consequences for employees such as revenge-seeking, sexual harassment, and social undermining. The first paper examines the dynamic process of lying that can escalate over time and result in a corporate culture where lying is viewed as legitimate. The second paper integrates research on psychological contract breach, revenge cognitions and rumour spreading as a form of employee deviance. The third paper reports on target vulnerability of sexual harassment in the nursing profession. The fourth paper examines the effects of associating with a devalued individual. Finally, our discussant focuses on the implications of the research papers in advancing theory and practice in studying the dark side of organisational behaviour. In particular, this symposium enhances participants' knowledge in three specific areas: (1) Participants will be exposed to a process model of deviance that explores how interpretation of behaviours such as lying shift from “deviant” to “legitimate” over time. By linking the process model of interpreting deviance (Presentation 1) with examples of a specific form of deviance (rumour spreading – Presentation 2) the symposium extends understanding of how organisational cultures of lying and mistrust arise, are perpetuated, and become accepted as the norm. (2) Much research on employee devaluation narrowly conceptualises it as being perpetrated by a co-worker on the basis of an employee characteristic (e.g., race). This symposium takes

a novel approach by considering the role of individuals who are not members of the organisation. By contrasting employees who undertake paid (presentation 3) and unpaid (presentation 4) care, the symposium provides a broader and more thought provoking perspective on role of organisational “outsiders” in employee mistreatment. (3) Employees who experience negative behaviours have lower commitment and are more likely to turnover. This symposium enhances our understanding of how mistreatment is interpreted by exploring how the affected employee’s cognition (i.e., psychological contract breach, revenge cognitions – Presentation 2) mediates the relationship between mistreatment (i.e., harassment – Presentation 3; social distancing – Presentation 4) and organisational withdrawal.

Going down the slippery slope: A preliminary process model of organisational lying

CHAN-SERAFIN, S. (The University of New South Wales)

Despite the pervasiveness of lying in organisations and its likely deleterious effects, the temporal character of lying is an understudied phenomenon in organisational research. As revealed by recent corporate scandals, lying is not static; rather, it is a dynamic process that escalates over time. Drawing upon psychological and philosophical literatures, I theorize how the process of lying unfolds in organisations. During Phase 1, lying occurs at an individual level, whereby after telling one’s first lie, an organisational member tends to go down the slippery slope and lie again when given opportunities to do so (i.e., domino lying). If no attempts were made to halt such individual lying, Phase 2 is initiated and domino lying metastasizes into a culture of lying. In such a culture, acts of lying are carried out by multiple organisational members, become embedded and are viewed as legitimate behaviours within the organisation. The presentation will focus on theory development for Phase 1 and some preliminary experimental data supporting such a phase will be provided. Individual differences such as integrity and psychological mechanisms such as individual’s role conflict, escalation of

commitment, and reinforcement traps will be discussed to explain why liars go down the slippery slope. The theoretical arguments that will be presented suggest that the notion “one lie perpetuates many more” is part of human nature. This theoretical model is a preliminary step towards understanding the dynamics of how lies spread, an occurrence that, when left unchecked, can be very damaging to organisations. In terms of practical implications, understanding the process of lying and its escalation can better equip organisational psychologists, as well as management, to minimize this damaging practice in organisations.

Keywords: lying, research, organisational psychologists, management, organisations

An eye for an eye, a tooth for a tooth: investigating the role of revenge and individual differences in predicting rumor transmission

KIAZAD, K. (The University of Melbourne)

Psychological contract breach occurs when employees perceive that their organization has failed to fulfil its promised obligations. This paper represents an initial effort to integrate research on psychological contract breach, revenge cognitions, and rumor spreading conceptualized as a form of employee deviance. Specifically, we test the notion that breach triggers a desire for revenge which in turn precipitates willingness to spread a damaging rumor about the organisation. The hypotheses were tested using a 2 x 2 between groups factorial design. Participants were randomly assigned to one of four conditions that manipulated psychological contract breach (no breach vs with breach) and source credibility (low vs. high). A contrasting vignette was designed to manipulate the independent variables. The use of an experimentally manipulated vignette enabled greater control over the independent variables and can eliminate the potential ethical problems associated with manipulating the actual experience of broken promises. In Study One, data were collected from 100 Australian retail employees, while data from Study Two were collected from 82 Australian retail workers. Study One revealed a main effect of breach on

rumor transmission intentions, with only a partial mediation of revenge cognitions in this relationship. Study Two also found a main effect of breach on transmission intentions, but full mediation of revenge cognitions in the relationship between breach and rumor transmission intentions. Study Two also found that negative reciprocity and trait anger moderated the relationship between breach and revenge cognitions; the positive relationship was stronger for those with high levels of negative reciprocity and trait anger compared to those with low levels of these traits. Overall, findings suggest that psychological contract breach precipitates rumor transmission, and that the likelihood of an employee reacting as such is influenced by revenge cognitions and individual differences.

Keywords: *psychological contract, revenge cognitions, rumor spreading, employee deviance, ethical issues*

Sexual harassment in nursing: Understanding target vulnerability

COGIN, J. (The University of New South Wales)

This study aims to assess the prevalence and determinants of sexual harassment in the nursing profession. The effect of a nurse's socio-demographic characteristics and aspects of their daily work environment (the sex of their supervisor and harasser and job gender ratio) are investigated. Drawing on a variety of theoretical models and addressing a limitation of a previous study, the experiences of male and female nurses are compared. Five hundred and thirty eight questionnaires were collected from qualified and student nurses working in eight different hospitals across metropolitan and rural areas in Australia. Sexual harassment in nursing is high with more than 60% of female nurses and 34% of male nurses reporting a sexual harassment incident in the 48 months prior to this study. Patients were identified as the main perpetrator. The effect of a nurse's socio-demographic characteristics and job gender ratio were important in determining the likelihood of sexual harassment. Findings also indicate that aspects of a nurse's daily work environment, gender and age combine to influence harassment severity levels. Differential effects for sex of

supervisor, education and other variables were uncovered. A focus upon outcomes of sexual harassment have led to a concentration on reactive measures to deal with it (such as complaint processes and reporting mechanisms) and the neglect of new initiatives for preventing harassment occurring in the first place. Rather than just acknowledging the prevalence of sexual harassment, this study identifies some of the core organisational facilitators of it which heighten an individual's vulnerability to being harassed. Understanding the determinants of sexual harassment allows for more effective allocation of resources to managing this growing problem.

Keywords: *sexual harassment, nursing, organisational facilitators, socio-demographic characteristics, work environment*

The cost of caring: Stigma by association

BAINBRIDGE, H. (The University of New South Wales)

Researchers have focused on the experience of those who possess devalued characteristics such as race, disability, age, and social class. Each devalued individual operates within a broader social context and consequently each is likely to establish social relationships with people who do not possess these characteristics. For these associated people, studies suggest that the relationships can have unfavourable effects (e.g., Birenbaum, 1992; Mehta & Farina, 1988; Neuberg, Smith, Hoffman, & Russell, 1994). While a growing literature comments on these negative outcomes, a significant barrier to ongoing research has been the lack of carefully developed empirical measures. This paper reports on the development of two empirical measures pertaining to the effects of associating with a devalued or stigmatised other. Stigma by association and valuation by association items were developed via two approaches. The first approach to item development consisted of an extensive review of published research relevant to associates of the devalued. The second approach consisted of 32 interviews with individuals (caregivers) who provide unpaid, informal assistance to people with a disability. The purpose of these interviews was to elicit instances of stigma by

association or valuation by association. These instances were utilised to develop stigma by association and valuation by association items for inclusion in the two measures. Survey data was then collected to allow examination of the content validity, internal consistency and construct validity of the stigma by association and valuation by association measures. Evidence is provided in support of the content validity, internal consistency, and construct validity of the measures. The stigma and valuation by association measures were demonstrated to be distinct from one another. The development of the two measures in this study is an important step towards a better comprehension of the extent to which people are affected by the relationships they maintain with the stigmatised. These measures will enable a better understanding of stigma by association and valuation by association effects by allowing researchers in this field to utilise well constructed measures of the concepts under study.

Keywords: stigma, valuation, caregivers, stigma, devalued characteristics

Determinants, catalysts, and barriers to sustainable behavior: Psychological influences and financial incentives

Chair(s): BOLDERDIJK, J. W. (University of Groningen)

Most researchers agree that in order to effectively tackle environmental problems, we need to reduce current consumption behavior, as well as develop and adopt new energy-saving technologies. Reliance on either strategy alone is widely recognized to be inefficient. For instance, new technologies will only help to reduce environmental problems if they are widely adopted and used properly. This symposium discusses how both social psychological processes and financial incentives can be employed to change current consumption patterns and to promote the adoption of new technologies. In this symposium, we explore and identify factors that determine individuals' willingness to curtail their current consumption practices, as well as those that influence individuals' willingness to accept new, energy-efficient technologies. Furthermore, the symposium will discuss the extent to which normative influence and financial incentives can be used to change behavior. The presented research is conducted via different methodologies, ranging from surveys to field experiments, and the interplay between these methodologies will also be discussed.

The effects of pay-as-you-drive vehicle insurance on driving volume and style

BOLDERDIJK, J. W. (University of Groningen)

Technological innovations may help increase fuel efficiency and reduce emissions, but their effects are limited if car users do not change their driving behavior simultaneously. Thus, persuading drivers to increase the fuel efficiency of their driving style (for instance by maintaining the speed limit), as well as to

reduce their travel volume, may prove crucial in achieving significant cuts in CO₂ emissions. Our aim was to determine if financial incentives can be an effective tool in changing driving behavior. In collaboration with five Dutch car insurance companies, we tested how a pay-as-you-drive vehicle insurance would affect driving style and driving volume. In total, 157 young drivers, aged between 18 – 27 years could save 50 Euros on their monthly insurance premium when by driving less and keeping speed limits. Driving behavior was monitored through GPS technology during one year. Analyses show that, relative to the control group, participants that received the financial incentive committed significantly less speed violations, but did not reduce their mileage. It was concluded that financial incentives reduced driver speed, but did not reduce mileage.

Keywords: *fuel efficiency, driving behaviour, financial incentives, car insurance, speeding*

The effectiveness of prompts and models on food composting by restaurant patrons

SUSSMAN, R. (University of Victoria)

Composting of biodegradable waste is an effective means of reducing landfill garbage and improving the state of our environment. The widespread adoption of this behaviour by community members is subject to various social psychological processes, and our aim was to determine whether social norms could be used to encourage use of a compost bin in public eateries. Table top signs outlining a pro-composting injunctive norm, and models demonstrating the behaviour (descriptive norm) were employed in two shopping centre food courts and a fast food restaurant to attempt to increase the use of public compost bins. When diners viewed models composting ahead of them, they were more likely to compost as well. However, the signs had no effect on composting rates, either alone or in combination with the models. Results support the idea that behaving in a pro-environmental manner around others can have an influence on them to behave pro-environmentally as well.

Keywords: *composting, biodegradable waste, environment, social norms, fast food restaurant*

Factors influencing household energy use

VAN DER WERFF, E. (University of Groningen)

Various studies reveal that household energy use is mainly related to socio-demographic variables, such as income and household size, while motivational factors play only a minor role (e.g., Abrahamse, 2007; Gatersleben, Steg & Vlek, 2002). However, most studies on household energy use did include a few motivational factors only. In this study we tested to what extent a comprehensive set of motivational factors derived from the theory of planned behavior and the norm activation model influence household energy use. We will test the predictive power of both models separately and in combination in a survey of households in the Netherlands ($N = 500$). Besides total household energy use, we examine how these motivational factors affect specific energy-related behaviors, including showering, energy efficient driving style and meat consumption. The results will show whether the theory of planned behaviour, the norm activation model or a combination of both models will predict different types of household energy use best. We will discuss the main results and the theoretical and practical implications of our study.

Keywords: *household energy use, motivational factors, theory of planned behavior, norm activation model, Netherlands*

Psychological influences on the acceptance of new energy technologies: An investigation of the Plug-in Hybrid Electric Vehicle (PHEV)

KORMOS, C. (University of Victoria)

Historically, consumers have been reluctant to adopt new technologies, especially those that appear to be radically different (Nye, 1998). And yet, technological innovation is essential for mitigating climate change. For instance, new transportation technologies, such as the plug-in hybrid electric vehicle (PHEV), hold the potential to eventually render transportation-related petroleum use obsolete (Denholm &

Short, 2006); but so far most research has mainly focused on the technical barriers to PHEV technology (Sanna, 2005; Sovacool & Hirsh, 2008). Therefore, this study aims to identify the psychological factors that influence acceptance and adoption of new energy technologies, and to rank these factors in terms of their relative importance. A community sample of 120 rural and urban drivers will view an online commercial for an upcoming PHEV, as well as details about its financial, technical, and behavioural aspects. Next, participants will indicate their perceptions of, and willingness to adopt, the technology via a series of quantitative and qualitative questions. Then, questionnaires will assess potential psychological influences on the acceptance of this new technology, including (1) anticipated changes to QoL (Poortinga et al., 2004), (2) barriers to sustainable behaviour, such as habit and social norms (Gifford, 2008), and (3) five types of product risk perception (Mitchell, 1998). Finally, participants will report their expected annual fuel savings and time anticipated to recover cost of the vehicle via fuel savings, and then will choose between various tax credit incentives. Data collection is currently ongoing. It is expected that those who perceive a higher degree of psychological barriers will be less willing to consider investing in this new technology. Decreased reliance on the internal combustion engine will result in various benefits, most importantly the mitigation of climate change. Research on the social factors that influence the acceptance of such technologies is both essential and timely. Without it, technical barriers may be resolved only to find that social issues still thwart widespread acceptance of climate change-relevant technologies.

Keywords: climate change, plug-in hybrid electric vehicle, transport, sustainable behaviour, new technologies

Developing leaders for a complex world: New models of leadership and the use of coaching in creating developmental change among leaders

Chair(s): LANE, D. (Middlesex University London)

We live in a world that is faced with a bewildering array of highly complex challenges. Today's leaders are increasingly called upon to engage followers and make critical decisions in complex and rapidly changing personal, organisational, economic and political environments. In order to prepare leaders to better meet these challenges, new models of leadership are emerging that incorporate insights drawn from complex adaptive systems theories, developmental psychology and positive psychology. Currently, the most researched and popular models of leadership incorporate transformational leadership. Transformational leadership focuses on the role of the leader in modelling valued behaviours, defining goals, and developing others through the provision of staged and individualised challenges, feedback, coaching and support. In line with these model managers are urged to develop motivating, value-based, strategic visions and to empower their staff to pursue those visions in ways that are intrinsically rewarding. While this approach to leadership is welcome, we contend that the focus on identifying and training discrete 'transformational' behaviours is insufficient to achieve the above outcomes. Rather, for leaders to be successful, they need the ability to select and organise discrete transformational and transactional behaviours into coherent responses sensitive to the systemic features of the challenges they face. This symposium focuses on the role of executive coaching, informed by developmental psychology, complexity theory and positive psychology, in developing leaders' capacity to understand, engage with and shape organisational systems in

our increasingly complex world. Key learning objectives will include: A brief overview of emerging models of leadership that are both informed by developmental psychological theory, complex adaptive systems theories and positive; An understanding of the role of executive coaching in helping to create shifts in the developmental complexity of leaders' meaning making and systemic understanding; and the practical application of the emerging mindfulness and wisdom literatures in positive psychology for leadership development. The results of ecologically valid research conducted in a range of organisational settings across a range of industries will be presented to support these conclusions drawn in this symposium.

The four factor model of leadership: Empirical foundations and practical application

CAVANAGH, M. (Sydney University, Sydney)

This paper presents a new model of leadership, the Four Factor Model of leadership, and reports preliminary results of a large scale longitudinal study into developing leaders for high stress workplaces based on this model. This three year study represents the largest study yet conducted into developmental coaching and leadership. For leaders to be successful, they need the ability to select and organise behaviours into coherent responses sensitive to the systemic features of the situations they face. Building on the work of constructive developmental theorists we contend that the ability to do this relies on the complexity of the leader's ability to understand, critically consider and integrate multiple competing perspectives into higher order perspectives in order to guide effective action. We call this ability Perspective-Taking Capacity (PTC). In order to support and implement these new perspectives, leaders need skills associated with self regulation, the identification of systemically useful purpose and the ability to create positive patterns of communication. The study is a three year longitudinal study involving 270 participants drawn from two industries. Health and Law. Participants were medical, allied health and general staff in a Network of five Sydney based hospitals and partners, senior associates and

support staff from a major Australian law firm. Both of these settings represent high stress complex workplaces undergoing significant change. 6 cohorts of participants were randomized into two treatment groups and a waitlist control group. The first treatment group participated four day workshops aimed at identifying and developing perspective taking capacity, mindfulness, strategic purpose and positivity. The second treatment condition involved 8 sessions of developmental executive coaching in addition to attendance at the developmental workshop. Preliminary results from qualitative and quantitative data will be presented identifying changes in subjective well-being, productivity, engagement, mental health and perspective taking capacity among participants. While analysis is still be undertaken, preliminary findings suggest that developmental coaching is perceived by participants as highly valued and useful in enhancing leadership performance, team engagement and the development of more effective perspectives on the leadership challenges faced by participants.

Keywords: leadership, four factor model of leadership, longitudinal study, coaching, perspective taking

Multi-perspective analyses of complex organizational changes and coaching

GREIF, S. (Institute of Business Psychological Research and Counseling, Osnabrueck)

Based on an integrative theory, change management is seen as managing the challenges associated with complex self-organizing interactions between multiple system levels (e.g. individual, group, organisation, national and international economies). Differing views of internal stakeholders contribute to this complexity. The paper shows how it is possible to analyse multiple stakeholders' perspectives and use the results for coaching CEO's and project managers. The Change Explorer process is a theory-based method that combines interviews data from the internal stakeholders at all levels of the organisation (CEO to lowest level) and data drawn from standard questionnaire scales. Differing from typical evaluations, this method not only assesses the

results of the changes, but also subjective causes of concrete positive and negative results, using presentation cards and structure diagrams of the individual's subjective theories of the changes. Accompanied by coaching, the individual interviews and suggestions for improvements are analysed and utilized in a common evaluation workshop with all interview partners. Here change improvement groups are implemented. Their results are evaluated in follow-up workshops. Change Explorer methodology has been applied both in an international study of 432 successes and failures of organisational change projects and in a series of case studies, aimed at an improving the success rates of near failure change programmes via coaching of the CEO and the project manager. Implementation of the Change Explorer process in change programmes which were on the brink of failure, led to strong improvements in the success rate of these programmes. The coaching of the CEO and project manager and the facilitation of the evaluation workshop focuses on a mutual showing of respect to different perspectives and contributions. In so doing, it activates the change readiness of the participants and liberates self-organized cooperation in improvement groups even when strong resistances and conflicts exist between leadership levels. This paper shows that the combination of multi-perspective interviews, workshops with stakeholders and targeted coaching seems to be a promising tool for an improvement the success of difficult change programs.

Keywords: leadership, change management, multiple system levels, change explorer process, coaching

Validation of a standardised measure of self-construal and Perspective Taking Capacity (PTC) for leadership effectiveness

ATKINS, P. (Australian National University, Canberra)

This study aimed to develop and validate a standardised instrument to measure an evolving sense of self in relationship to experience. The Developmental Stage Inventory (DSI-10) was developed using ideas

from Kegan's (1982; 1994) theory of adult development and self-determination theory (Deci & Ryan, 1985). It measures intrapersonal, interpersonal and cognitive elements of an individual's self-construal by inviting people to assess their own capacity to stand back from their own self-interests, beliefs and assumptions in particular situations and adopt a systemic, dynamic and inclusive view of themselves, others and the world. Such mature perspective taking is arguably becoming increasingly important in modern workplaces but previous measures have either been narrowly focused or too time consuming and labour intensive to allow broad empirical testing. The DSI-10 contains scenarios and response items designed to target each of the 4 adult stages of development articulated by Kegan (1982; 1994). The instrument was administered to 120 professional staff working in a law firm and a hospital, along with a battery of other measures of personality, cognitive style, wellbeing and leadership as part of a larger intervention study involving coaching and leadership training. This study focuses on the cross-sectional elements of that broader study by assessing the factor structure of the instrument together with convergent and divergent validation evidence derived by comparison with other individual differences measures including Ardel's (2003) 3D-Wisdom Scale, the Multifactor Leadership Questionnaire (ref xx) and other measures of cognitive, emotional and social functioning. At the time of writing, the analysis is in a preliminary phase. Early results suggest that the instrument provides useful information on leader PTC that has not previously been measured by other instruments, and is likely to predict unique variance in a range of dependent variables relevant to leadership functioning. Having an instrument to quickly, easily and accurately assess self-construal and PTC is an essential step towards the development and refinement of theories and interventions focused on how leaders make sense of their leadership. This study highlights one potentially valuable approach to such an instrument and provides useful indicators for further research.

Keywords: standardised instrument, Developmental Stage Inventory, self-construal, perspective taking, leadership

Mindfulness, Leadership and the 4-Factor Model

SPENCE, G. (Sydney University, Sydney)

This paper discusses the relationship of mindfulness to leadership, using the conceptual framework provided by the 4-Factor Model. Mindfulness is an awareness process. It involves the purposeful, flexible deployment of attention towards momentary experience and an accompanying acceptance of it. Given increasing evidence that mindfulness enables more objective observation of cognitive, affective and behavioural processes and promotes intentional (rather than reactive) behavioural responses, it appears to be essential for effective leadership. As such, mindfulness represents the self-regulatory component of the model and captures an aspect of mental functioning that is central to all human development and growth. The data to be presented in this paper was collected from a 3-year longitudinal study involving 270 participants drawn from two industries (public health and law). Six cohorts of participants (3 per organisation; 45 per cohort) were randomly assigned to either a training only, training + coaching, or wait list control group. Mindfulness was measured using the Philadelphia Mindfulness Scale (PMS), a 20-item self-report instrument that measures the construct across two dimensions: present moment-awareness and acceptance. Whilst quantitative data analysis is still to be finalized, the design of the study will permit results from both cross-sectional and longitudinal analyses to be presented. As such, preliminary results will be presented to help clarify the relationship between mindfulness and other components of the 4-factor model (i.e. perspective-taking capacity, purpose & positivity). In addition, between-subjects repeated-measures analyses (i.e. pre, post & follow-up) will be conducted to assess the impact of the leadership intervention and its primary ingredients (i.e. leadership training and developmental coaching informed by the 4-Factor Model). Based on the theoretical relevance that mindfulness has for effective leadership, along with anecdotal feedback obtained from participants, it is expected that

mindfulness will correlate strongly with the other factors of the theoretical model, thereby confirming its centrality to the model. Whilst it is also expected that leadership training and developmental coaching will enhance mindfulness over time, it is currently unclear to what degree this might occur. The nature and application of mindfulness training within executive coaching contexts will also be discussed.

Keywords: mindfulness, leadership, attention, mental functioning, 4-Factor Model

Developmental health psychology: Emerging themes and contemporary research

Chair(s): ZIEGELMANN, J. P. (Freie Universitaet Berlin; German Centre of Gerontology)

Discussant(s): ABRAHAM, C. (Maastricht University)

This symposium takes a distinct developmental perspective on health and aging. Four presentations from diverse backgrounds of health and aging present contemporary findings as well as emerging themes as applied to different phases of the life cycle. The present symposium highlights the application of advanced theoretical approaches to the study of health self-regulation and successful development across the lifespan. The overarching goal of the symposium is to apply a self-regulation perspective on health behaviors, health goals, and resources in the framework of successful development. The first contribution focuses on a high-profile health-related behaviour (i.e., ecstasy use) in younger adults as a developmentally salient group and gives insights into the dynamics underlying starting, maintaining and ceasing ecstasy use. The main objective of the second contribution is to examine some contribution from psychology on the field of positive ageing coming from a set of longitudinal, cross-sectional and cross-cultural research on optimal aging. Contribution number three employs a parallel-process, longitudinal evaluation of decline in physical health and functional ability on age-comparative self-rated health, and focuses on the adaptive use of enhanced social downgrading in older adults. The last empirical contribution posits that selection, optimization and compensation strategy use can be a central resource in health behavior change across the lifespan. This study aims to develop an intervention fostering strategy use and investigates whether the increase in strategy use explains intervention success. Finally, the discussant will discuss the various findings and theoretical approaches.

The audience will be given the opportunity for feedback. The three key learning objectives of this symposium are the following: First insights will be given how health self-regulation is functioning over the adult lifespan. Second this symposiums aims to present implications for designing intervention in an age sensitive way. Finally the aim is to illustrate how to translate theory into practice in the field of developmental health psychology.

The wild years: Young people passing in and out of ecstasy use

PETERS, G. J. (Maastricht University), ABRAHAM, C. (Maastricht University), KOK, G. (Maastricht University)

Ecstasy use is potentially damaging, but remains a poorly understood phenomenon. Health promotion efforts could be enhanced by a better understanding of the dynamics underlying starting, maintaining and ceasing ecstasy use. We aimed to identify and map determinants of a series of ecstasy-use behaviour patterns. Based on a meta-analysis of 11 studies and a narrative review of 22 studies, we designed and conducted a qualitative interview study in the Netherlands, gathering data in both focus groups and individual interviews ($N = 32$). We then combined the insights from all these studies in a quantitative longitudinal survey, which we administered to several samples through the internet ($N = 6174$). This survey assessed participants at three time points measuring determinants of (and reasons for) 15 ecstasy use and use-related behaviors. Most quantitative research into ecstasy use has examined determinants of using ecstasy, rather than, for example ceasing use. Our quantitative online survey also shows that there are different determinants of starting and ceasing ecstasy use. This means that models of ecstasy which predominate in the quantitative literature may not be good guides to the processes through which people cease using ecstasy. Our qualitative and quantitative data both suggest that for most people ecstasy use is a phase that ends without intervention as goals and lifestyles change through maturation. The results suggest that health promotion interventions may most effectively

target harm reduction rather than abstinence. Therefore, results characterising determinants of “chilling out”, an important harm reduction practice, will be reported. Determinants of ecstasy use do not necessarily provide a good guide to the modifiable determinants of other ecstasy-use behaviour patterns such “chilling out” or ceasing use. Behaviour-specific analyses such as those presented here are required. It appears most ecstasy users cease ecstasy use autonomously after a period of use. This implies that health promotion may be best focused on harm reduction, rather than abstinence, messages.

Keywords: *ecstasy use, health promotion, harm reduction*

Healthy aging: Some empirical results

FERNÁNDEZ-BALLESTEROS, R. (Universidad Autonoma de Madrid), ZAMARRÓN, M. D. (Universidad Autonoma de Madrid), LÓPEZ, M. D. (Universidad Autonoma de Madrid), MOLINA, M. A. (Universidad Autonoma de Madrid), SCHETTINI, R. (Universidad Autonoma de Madrid), SANTACREU, M. (Universidad Autonoma de Madrid)

From an evidence based point of view, it has been during the last decades of XX Century, when from the fields of biomedicine and social sciences emerged the so called “new paradigm” or “revolution” on the field of ageing and in a broad sense in the science of aging: a positive view. The core of this new paradigm is a new construct: healthy, successful, optimal, active or positive ageing. The main objective of this presentation is to examine some contribution from psychology on the field of positive ageing coming from a set of longitudinal, cross-sectional and cross-cultural research on optimal aging. Results from three research Projects will be presented. First of all a cross-cultural study (ten countries from Latin American and Europe with comparisons with Japan and USA) about the “pop” concept of “aging well” will be presented. Secondly, a cross-sectional study about active aging (ELEA) assessing independent elders from 55 to 75 years old through anthropometric measures, bio-behavioral and psychophysiological characteristics, health and life styles, cognitive

functioning, affect and personality traits and social relationships will be synthesized. Finally, a longitudinal study conducted with nonagenarian (90+ project) will be also presented examining the importance of behavioural and psychological factors for mortality and survival. A multidimensional concept of aging well emerged in which psychological factors are relevant. Also, psychological functioning seems to be an important predictor for healthy aging as well as psychological factors predict mortality. Finally, a multidimensional empirical concept of active aging distinguish between those older than 90 who die and who do not. Active and healthy aging is an extraordinary important concept for psychology and psychologist because psychological factors seem to be central components for aging well.

Keywords: *ageing, positive ageing, healthy aging, mortality*

Adaptive use of enhanced social downgrading in older adults: A parallel-process, longitudinal evaluation of decline in physical health and functional ability on age-comparative self-rated health

SARGENT-COX, K. A. (Australian National University), ANSTEY, K. J. (Australian National University), LUSZCZ, M. A. (Flinders University)

We tested the development view of enhanced social downgrading buffering self-evaluations from age-related health decline and loss, against a cognitive-constructivist contrast-identification model that hypothesises that severe frailty reduces reserves and resources for using coping strategies such as enhanced social downgrading. We examined how an accumulative and irreversible health threat (changes in self-reported physical and functional health) affects the trajectory of age-comparative self-rated health item (“How do you rate your health compared to others your own age?”) over 12 years (4 waves) in a large ($N = 2087$ at wave 1; 50.6% males) population-based sample of older adults (age 65 to 103). Parallel process latent growth models reveal that initial health threat, as measured by greater number of medical conditions and functional disabilities (ADLs), increase the use of enhanced social downgrading in older adults

in the following measurement occasion (medical conditions, Beta=0.02[0.01,0.02]; ADLs, Beta=0.05[0.01,0.09]) . However, with increased physical and functional loss over time, the likelihood of older adults rating their health as 'better' than others significantly declines (medical conditions, Beta=-0.23[-0.46,-0.01]; ADL, Beta=-0.75[-0.75,-0.22]). Results suggest that accumulative and irreversible health decline may place limitations on older adult's ability to cognitively construct a 'worse' off reference group and subsequently use social downgrading in an adaptive and functional manner.

Keywords: *social downgrading, self-evaluations, coping strategies, health threat*

it is an important component in interventions fostering the adoption and maintenance of physical activity.

Keywords: *health behavior change, strategy use, physical activity*

Developing a selection, optimization, and compensation intervention to foster lifelong autonomy and resources (FLARE)

ZIEGELMANN, J. P. (Freie Universität Berlin & German Centre of Gerontology), GELLERT, P. (Freie Universität Berlin & German Centre of Gerontology)

Selection, optimization and compensation strategy use can be a central resource in health behavior change. The aim of this study is to develop an intervention fostering strategy use and investigate whether the increase in strategy use explains intervention success. A sample of 400 individuals aged 60 to 85 completed an intervention to increase physical activity. The primary goal of the intervention was to foster physical activity and participants were randomly assigned to a standard treatment (i.e., planning of health behavior change) or to a treatment with a specific focus on strategy use (i.e., planning and strategy use). Questionnaires assessed key concepts of successful aging, strategy use and the amount of physical activities performed pre-intervention and one month thereafter. Compared to the standard treatment group there was a significant increase in strategy use as well as physical activity. Strategy use emerged as mediator of intervention success in terms of physical activity. The amount of physical activity was an important predictor of successful aging indicators. This study shows that strategy use can be trained in interventions focusing on older adults and that

Developments in measurement technologies

Chair(s): BARTRAM, D. (SHL Group Ltd)

Discussant(s): HATTIE, J. (University of Auckland)

Measurement technologies have changed in many ways in the past decade. The present symposium can do no more than present a sample of the advances that have taken place. The symposium brings together leading exponents in the field of measurement to describe how technologies have developed to increase the efficiency of assessment methods. The symposium will provide attendees with insights into the latest developments in the application of multi-dimensional IRT models to forced-choice personality assessment item formats; the growth of structural equation modelling (SEM) and developments that have taken place in the application of SEM and the design and application of new item formats. Some insights into future developments will be provided by the discussant.

Application of a multi-dimensional IRT model to scoring the OPQ32

BARTRAM, D. (SHL Group Ltd)

Item Response Theory has been widely applied in the area of ability and attainment testing. It has been less commonly applied to the development of scoring models for personality assessment. In this presentation alternative item formats for use in personality assessment – forced choice versus single stimulus – will be discussed and the development of a multidimensional IRT scoring model for use with the OPQ32's forced-choice format items will be outlined. This development is significant in that it makes possible the production of normative scale scores from item formats that in the past always produced ipsative scale scores. The benefits of this are discussed. In particular, the paper will focus on the value of forced choice normative instrument construction on reducing

systematic biases in testing associated with high stakes assessment settings and cultural differences. We are now able to realise these benefits without the disadvantages associated with ipsative scale properties.

Keywords: *Item Response Theory, personality assessment, testing, systematic biases*

The evolution of structural equation modeling as a measurement technology

BYRNE, B. (University of Ottawa)

The growth of structural equation modeling (SEM) over the past 35 years or so is nothing short of phenomenal! Within the framework of psychological research, at least, it has evolved from being a mere whisper in the early 70's, a curiosity in the late 70's, a practice of questionable repute in the early 80's, a "hot" statistical procedure in the late 80's, through to its current status as a powerful and sound methodology capable of providing answers to a broad spectrum of research questions. Indeed, a review of the social science literature across this time span reveals an ever-increasing number of journal articles in which SEM applications have been used to address an array of substantive, as well as methodological issues. An interesting offshoot of its popularity has been the equally expanding, albeit somewhat more subtle growth of computer software capable of handling the statistical rigors demanded by the SEM methodology. In combination, each component of this symbiotic pair serves as a stimulus for the other in advancing the practice of SEM methodology. As substantive researchers increasingly seek more comprehensive answers to their research questions, statistical researchers are challenged to further advance the capabilities of SEM methodology, which in turn, necessitates further development of existing SEM software programs. Importantly, the relevance of these important challenges extends across a broad range of enterprises, from the hallowed halls of academia to the hard core business world of large scale testing and development. In this symposium, I present a brief glimpse into a few of the past challenges in using SEM methodological strategies, followed by an overview of present

applications and future methodological challenges.

Keywords: *structural equation modeling, software, methodological strategies*

New multiple choice format enhances measurement quality, security and fairness

FOSTER, D. (Kryterion Inc)

The multiple choice item type has not varied significantly since the early 1900s. Usually the item stem is presented followed by several options, one of which is keyed as the correct one. Examinees select one option from those presented. This format has worked well on paper-and-pencil exams and has performed similarly when exams were converted to computer administration. However, with computerization, it is possible to vary the presentation format leading to significant advantages over the traditional format. One such variant is the new Discrete Option Multiple Choice (DOMC). In its simplest version, after displaying the stem, the DOMC item type presents the options one at a time and asks examinees to declare if each is the correct one or not. With this method not all of the options need to be displayed, significantly reducing content exposure. In addition to this security advantage, measurement quality is enhanced by reducing content-irrelevant variance associated with particular “test taking skills” that exploit the simultaneous presentation of options and which have nothing to do with content knowledge or skills.

Keywords: *multiple choice item type, paper-and-pencil exams, computer administration, discrete option multiple choice, content-irrelevant variance*

Different flexible work arrangements, accounting for contextual and individual diversity

Chair(s): DETTMERS, J. (University of Hamburg)

Discussant(s): RIGOTTI, T. (University of Leipzig)

In the face of globalisation, changing markets and increased customer needs the requirement to act promptly and flexibly on demand are ever more pressing issues for companies. Companies try to cope with these requirements by using flexible work arrangements. Reilly (1998) describes various forms of flexibility on the establishment level, including numerical, functional, temporal, locational, and financial flexibility. With the rise of flexible employment arrangements, also scientific interest increased for studying underlying processes, relations, and protective factors that help to cope with stress related to flexibility-demands. However, research has produced conflicting findings on the psychological impact of flexible employment arrangements. This symposium on flexible work arrangements brings together experts in the field from different countries who investigated the effects of different forms of flexibility on workers in terms of well-being, motivation, performance and work-life-balance. Results of recent studies will be presented regarding different employment schemes, such as on-call work, “flexitime”, fixed-term contracts, temporary work and others. All contributions to the symposium take a consequent interactional perspective, honouring the underlying complexity of factors, including multilevel and longitudinal approaches in order to better understand mixed findings.

On-call work and well-being

DETMERS, J. (University of Hamburg)

24h-availability of service and generally unsteady workloads require flexible working

hours. One form of flexible working hours in standard employment contracts is on-call work which combines spatial and temporal flexibility. On-call work as a background duty, which covers the work demands beyond regular working hours, has grown in importance over the past few years. As employees who are on-call must expect to be called at home during their free time, in the evening or at night, in order to complete work on-call work may affect recovery processes and work-life-balance. There is, however, considerably little research concerning whether, and in what way this form of work influences health and well-being. This study addressed this gap by investigating the impact of on-call work on well-being. 31 employees of an information-technology service organization aged between 40 and 49 years on average participated in the study. The study comprised two parts: In the first part, employees were initially subjected to a medical check and were asked to complete a questionnaire covering personal variables, evaluation of on-call work and work characteristics. The second part consisted of a diary study. Participants filled out a short questionnaire concerning indicators of well-being, leisure time activities and control variables on four work days with on-call duty and on four work days without on-call duty. Multilevel analyses including 248 days of 31 employees reveal significant effects of on-call work on well being indicators at the day level (level1). Personal evaluation of on-call work and other personal variables (level 2) moderate the effects. Moderating effects of work characteristics are inconsistent. The results of the presented study point at the importance of personal evaluations in terms of perceived legitimacy and strain attributed to on-call work. The inconsistent moderating effects of theoretically important work characteristics suggest further research including larger samples and more variance in work characteristics.

Keywords: employment, on-call work, work-life balance, well-being, stress

Impact of contextual factors on organizational level for attitudes and well-being of temporary work force

RIGOTTI, T. (University of Leipzig)

Temporary employment has become one of the primary human resource instruments to promote organizational flexibility. Research on temporary employment contracts so far have been mainly focused on comparisons between temporary and permanent employees and looked for potential moderators on the individual level. The aim of this study is to test the impact of organizational level factors on job attitudes, and well-being of temporary workers. The initial cross-national sample used in this study includes data from 207 organizations from seven countries (Sweden, Germany, UK, Spain, Netherlands, Belgium, Israel) with overall 5288 employees, including 1981 participants on non-permanent employment contracts. The sample covers three different sectors, namely retail, education, and food-industry. On the organizational level, size of organisation, and the share of temporary workers are used as controls. Additionally certain human resource practices and equal treatment of different members of the workforce were assessed on the organizational level. On the individual level, besides of sociodemographic controls, self-reports on job characteristics are included as predictors in multilevel-models. Hierarchical linear models partition the within- and between-subjects variance of the dependent variable at the simplest level by fitting random intercept terms for each company. So, compared to standard regression techniques, they allow examination of within-subjects and between-subjects variance separately. Organisational commitment, job satisfaction, fairness, irritation, and sick leave were used as dependent variables. We tested for main effects, and cross-level interactions. First of all, it can be stated, that there is substantial variance between organizations in both the dependent and independent variables of this study. While many of the organizational characteristics, and individual variables showed main effects, also a set of significant cross-level interactions could be revealed. We conclude that organizational context plays a relevant role, over and above important individual level variables in predicting job attitudes, and well-being of employees. Certain features of human resource practices seem to be evaluated differently by the core, and

temporary work force, which leads to recommendations towards a differential human resource management strategy.

Keywords: temporary employment, organizational flexibility, job attitudes, well-being, job satisfaction

Motives to work as “temporary”: Deepening in the heterogeneity of temporary workers

GRACIA, F. (University of Valencia)

As temporary work is a characteristic of the landscape of current employment relations in Europe, there is an urgent need to better understand this collective of workers. In order to get this goal, research should consider more complex models able to understand the heterogeneity of temporary workers. In this sense, some authors proposed a theoretical model to classify temporary workers into four groups based on their preference for temporary work and their perceived employability. This model has obtained empirical support in two studies. Differences have been found among the four groups of temporary workers, on a broad set of variables, including demographic, job context and content variables, job insecurity, job and organizational attitudes and performance-related variables. The aim of the present paper is to deepen in this model by analysing in a sample of temporary workers their motives to work as temporaries. The sample was composed by 1956 temporary workers of seven different countries. It was hypothesized that the four groups of temporary workers would differ in the motives to work with a non-permanent contract. Eight motives were explored: difficulty in finding a non-permanent contract, fit to my present needs or situation, a higher salary, more freedom, a stepping stone to a permanent contract, to get extra money, to acquire experience and practical knowledge, and not able to get another kind of contract. Descriptive analyses showed that “fit to my present needs” was the main motive for “boundaryless career” and for “career” temporaries. The main motive for “transitional” temporaries was “a stepping stone to a permanent contract”. Finally, “not able to get another kind of contract” was the

main motive for traditional temporaries. Furthermore, one-way ANOVA tests were performed and significant differences were obtained for each of the eight motives. On the basis of these findings, it is concluded that heterogeneity of temporary workers should be considered in future research in order to understand to this group of workers. In this sense, the taxonomy of temporary workers that is proposed in this paper and that has obtained empirical support can be a useful framework.

Keywords: temporary work, employability, job insecurity, job attitudes, performance

Consequences of flexible employment under different employment conditions

GUEST, D. (King’s College, London)

British pharmacists have enjoyed distinctive opportunities in the labour market due to a shortage of qualified pharmacists. Consequently, many have an opportunity to choose the type of employment arrangements that best suit them. This raises the question of whether those who have chosen flexible employment arrangements are more or less satisfied with their employment than those on standard employment. The recent international recession has affected all labour markets, raising the question of whether flexible employment becomes less attractive for workers under these circumstances. The aim of this study is therefore twofold. First, to compare key outcomes of those in standard and flexible employment and secondly to determine how far these comparisons are affected by the changing economic and employment climate. Data were collected from stratified random samples of pharmacists in 2004 and 2009 ($n = 1532$ and 1400). Three types of flexible employment were examined: part-time working, temporary contracts and multiple job holding. Part-timers formed 38% of the 2004 sample and 31% in 2009; in 2005, 11% were in temporary contracts rising to 23% in 2009 and in 2005 24% had multiple jobs compared with 19% in 2009. In 1995, after controlling for a large number of relevant background variables, the results revealed very few differences between those on any kind of flexible contract and those on standard

contracts suggesting that employment flexibility was not disadvantaging pharmacists. The only significant differences were that part-time workers reported lower stress and lower work-life conflict and higher commitment and temporary workers reported less work overload. In 2009, in the context of recession, part-time workers reported significantly lower job satisfaction and occupational commitment; temporary workers reported lower job satisfaction and lower organisational and occupational commitment while multiple job holders reported higher general job satisfaction. On the basis of these findings, we conclude that reactions to the experience of flexible employment are determined to a significant extent by the wider economic context. At the same time, we note that different types of employment flexibility have different consequences. Both findings should be taken into account in considering the impact of employment flexibility.

Keywords: flexible employment, employment, pharmacists, occupational commitment, job satisfaction

Career uncertainty and well-being of young scientists

HOEGE, T. (University of Innsbruck)

Academic careers are often a risky and uncertain journey. For example, in most countries temporary employment contracts are more the rule than the exception for young scientists. With respect to flexibility demands and career uncertainties scientific careers are to some extent prototypical for careers in general (Baruch & Hall, 2004). Against this background the presented study investigates the relationship between career uncertainty, job insecurity as well as conflicts between career goals vs. private life goals and general well-being among young academics before they have reached full professorship. The sample of the reported web-based questionnaire study consists of 702 scientists from Austria, Germany and the United Kingdom. Participants work in different academic disciplines. Results from multivariate statistical procedures (ANCOVA, SEM) give evidence that career uncertainty and conflicts between career and private life goals are

affected by the employment relationship (temporary vs. permanent). Moreover, career uncertainty, goal conflicts and impaired well-being are strongly related. The relationship between career uncertainty and impaired well-being is partially mediated by the experience of an effort-reward imbalance. Furthermore, the effect of actual job insecurity on impaired well-being is mediated by the more long-term and future-oriented career uncertainty. Controlled for age, country and academic discipline, results show that female participants reported a higher level of career uncertainty and goal conflicts than their male colleagues. It can be concluded that career uncertainty and conflicts between career goals and private life goals are significant problems among young scientists. National policies and academic institutions should provide clearer and more transparent career paths - including more stable employment relationships - and focus even more on gender differences. In general we argue that the concept of career uncertainty as well as consequences for individuals' "personal projects" including the work and private life domains should be more strongly considered in research on the possible detrimental effects of contingent employment.

Keywords: career uncertainty, well-being, scientists, temporary employment, job insecurity

Diversity matters: New findings regarding team performance and health

Chair(s): WEGGE, J. (TU Dresden), STAMOV-ROSSNAGEL, C. (Jacobs University Bremen)

Numerous researchers have posited that diversity constitutes a potential for enhanced performance in teams due to a broadened range of task-relevant experience and perspectives. However, empirical research has yielded mixed findings. Given that high levels of diversity are often inevitable for organizations, this is a disappointing state of affairs. Thus, there is an urgent need for more research that helps us to better understand how different types of team heterogeneity affect important organizational outcomes. In this symposium, we offer new theoretical and empirical insights into how age and gender diversity are related to various organizational outcomes, such as creativity, innovation, health disorders, and performance. In the first contribution, empirical findings are presented showing that age diversity is only positively related to innovation under two conditions: when there is a high appreciation of age diversity and when levels of burnout are low. In the second contribution, the authors emphasize the importance of considering team climate and the salience of age diversity when examining the relationship between diversity and burnout. In the third paper, an important nuance is introduced that has often been neglected in previous research: the proportion of males and females. Results show that female employees report more disorders as their numerical dominance in the team increases, while males' health disorders remained unchanged. In a similar vein, the fourth contribution reports results from a set of studies that indicate the importance of diversity faultlines and gender composition for group problem solving. In the last presentation, the authors offer new insights regarding the importance of diversity beliefs for effective teamwork, including diversity beliefs of supervisors. Together, these five contributions

broaden our understanding of the effects of both age and gender diversity on organizational outcomes. While confirming that diversity holds potential to enhance performance, all presentations make clear that caution, rather than indiscriminating praise, is warranted when levels of organizational diversity increase. Negative effects are just as likely as positive outcomes. Ensuring that demographic heterogeneity will be an asset rather than a liability requires informed steps that are rooted in a sound knowledge of the complex nature of diversity's effects.

Age diversity and innovation: The moderating role of diversity beliefs and burnout

WEGGE, J. (TU Dresden)

Based on previous research, it can be argued that age diverse teams do possess a variety of perspectives and knowledge that can be beneficial for both team performance and innovation. However, since negative effects of age diversity are often found, it is obvious that age diverse teams might be not willing or able to communicate and share knowledge accordingly. The present research tries to extend prior approaches to explain this observation by examining two new moderator variables – appreciation of age diversity in teams and burnout. More specifically, based on the diversity and burnout literature we propose that age diverse teams show only high innovation if diversity beliefs are positive and levels of burnout are low (ensuring enough emotional power and flexibility in thinking). The effect of age diversity (SD) in teams (archival data) on innovation was investigated within a sample of German pension offices, composed of 459 officers working in 67 groups in a cross sectional study. We developed a new scale assessing appreciation of age diversity ($\alpha = .93$). Burnout was assessed with five items from the MBI ($\alpha = .92$) and innovation was measured with 7 items drawn from Janssen (2004; supervisor judgments, $\alpha = .96$). Aggregation of the appreciation and burnout scales to the team level was justified (Rwg-values $> .70$). As expected, appreciation of age diversity moderated the relationship between age diversity and innovative behaviour as age

diverse teams showed higher levels of innovation only when appreciation of age diversity was high. Furthermore, as expected, it was found that high levels of burnout in teams resulted in lower levels of innovative behaviour. Moreover, the expected three-way interaction was significant as the innovation enhancing effect of age diversity was most pronounced under the condition with high levels of appreciation of age diversity and low levels of burnout. Taken together, these findings extend the literature on age diversity and innovation. The results suggest that both appreciation of age diversity and burnout play a significant role in predicting and explaining effects of age diversity on team innovation.

Keywords: age, performance, burnout, diversity, innovation

Multilevel analysis of main and interactive effects of team climate, age diversity and salience on burnout and job satisfaction

DIESTEL, S. (Leibniz Research Centre for Working Environment and Human Factors)

The present study focuses on cross-level effects of age diversity and team climate on experience of job strain as well as on employee's affective job attitudes. Previous research on the effects of age diversity revealed emotional exhaustion and job satisfaction as relevant outcomes being considerably affected by age diversity, social and cognitive intragroup conflicts (Blachnik et al., 2009). However, all analyses were conducted on group level and, thus, empirical evidence on cross-level effects on individual outcomes is largely absent. Moreover, team climate has been also neglected in the literature on diversity. Indeed, recent findings indicate that high team climate fosters elaboration of diverse information and acts as a moderator on the relationship between group characteristics and outcomes of the group (Eisenbeiss et al., 2008). Consequently, we tested whether age diversity as a group-level variable exerts direct effects on exhaustion and job satisfaction and whether team climate as a group-level moderator buffers the adverse effects of age diversity and salience on both individual outcomes. Participants were employees of a large supply

institution of a federal state in Germany conducting administrative and service work. A total of 408 participants completed a questionnaire and all respondents were assigned to 66 teams. In order to test the primary hypotheses, hierarchical linear models (HLM; Raudenbush & Bryk, 2002) were specified to predict exhaustion and satisfaction using salience of age diversity as an individual predictor and team climate as well as age diversity as a group-level predictor. Restricted Maximum Likelihood estimations revealed significant main effects of team climate on exhaustion and on satisfaction. Furthermore, age diversity and team climate significantly interacted in the prediction of exhaustion in that the relationship between age diversity and exhaustion was positive when team climate was high. Finally, team climate also moderated the association between salience and exhaustion in that the effect of salience on exhaustion was positive when team climate was low. The present study clearly indicates that team climate is an important factor influencing the effects of age diversity on individual strain experience. Further studies should also introduce other relevant outcomes, like performance.

Keywords: age diversity, job satisfaction, team climate, diversity, exhaustion

Men's and women's health disorders as a function of gender composition in work teams: A multilevel examination

SHEMLA, M. (TU Dresden)

Past research investigating the relationship between gender and occupational health has been inconclusive, providing evidence for both the idea that men and women differ in regard to amount of health symptoms (Guppy & Rick, 1996), as well as to the claim that women experience decreased health status (Matud, 2004). In our opinion, previous studies had one main impediment, namely the examination of the relationship between gender and health as a single-level phenomenon, hence ignoring the notion that both attain their meaning from their surrounding context (Kanter, 1977). Therefore, we scrutinize the cross-level influences on the relationship between gender and health. We suggest, as an explanation to

the inconsistent findings in the literature, that gender differences can be attributed to the specific gender composition in teams. Particularly, we expect team gender composition to moderate the relationship between employees' gender and self-rated health disorders such that women's health disorders increase with increasing proportions of women in a team, but men's health disorders remains uninfluenced by team gender composition changes. The study consisted of 3,078 females and 1,460 males working in German tax-offices. Since the data were hierarchical in structure, with participants nested within 222 teams that were, in turn, nested within 8 cities, we used hierarchical linear modeling to test our hypotheses. As expected, we found that individual-level gender was not related to health disorders but that team gender composition moderated this relationship. Specifically, we found that women reported more health disorders as the proportion of female employees in the team increased, while men's self-reported health disorders remained invariant with team gender composition changes. The finding that gender composition exerts a differential influence on health disorders of men and women offers a possible explanation to the inconsistent findings in the literature. The results are in line with the notion that women's health-related behaviors are a context-dependent phenomenon and support the claim that male employees maintain male-like behaviors both in minority and in majority.

Keywords: occupational health, gender, teams, team gender composition, health disorders

Effects of diversity faultlines, task motivation, and diversity beliefs on group complex problem solving

MEYER, B. (Universitaewt Zuerich)

Prior research shows that faultlines – the convergence of diversity attributes in groups splitting the group into homogeneous subgroups – can decrease group performance. Studies based on the categorization-elaboration model (CEM; van Knippenberg et al., 2004) show that faultlines can be bridged by pro-diversity beliefs and that this effect is mediated through the elaboration of task-

relevant information. The CEM also assumes that task motivation can lead diverse groups to high levels of performance, but this assumption has not been tested yet. We thus examined whether task motivation can overcome the negative effects of faultlines on group performance and whether such an effect is contingent on the diversity beliefs of the group members. We also tested whether such effects are mediated by information elaboration. We carried out an observational laboratory study with 42 groups that worked on a computer-simulated complex problem solving scenario. Group diversity was operationalized as diversity faultline strength based on gender, age, and educational background. Measures for information elaboration were obtained by coding the videos of the group interactions and from the computer simulation. Task motivation and diversity beliefs were surveyed with questionnaires at different measurement times. Diversity beliefs alone were unable to attenuate the observed negative effect of faultline strength on group performance. However, the three-way-interaction of faultline strength, diversity beliefs, and task performance was statistically significant: Groups with pro-diversity beliefs working under weaker faultlines profited from task motivation, as did groups with pro-diversity beliefs that worked under stronger faultlines. Groups with pro-similarity beliefs that worked under a strong faultline also profited from task motivation. These observed effects on task performance were not mediated by information elaboration, which did explain a significant amount of variance of group performance. Task motivation can attenuate the negative effects of diversity faultlines on group performance, if the group's diversity beliefs match its level of actual diversity. Diversity beliefs alone can be insufficient for bridging diversity faultlines. Future studies should examine other mediators of diversity on group performance besides information elaboration. In organizational practice, interventions targeting diversity beliefs should also target task motivation.

Keywords: diversity, categorization-elaboration model, performance, task motivation, faultlines

Fit for performance? Diversity belief fit and age-diverse team performance

STAMOV-ROSSNAGEL, C. (Jacobs University Bremen)

Age-diverse work teams might show performance superior to more heterogeneous teams given a larger pool of knowledge resources the former have available. However, age-diverse teams may also experience higher levels of interpersonal conflict that lower cooperation and counter the beneficial knowledge resources effect. Recent research has therefore focused on identifying moderators of the age diversity-performance relationship. From this research, it appears that diversity mindsets building on group members' beliefs about and understanding of the effects of team age diversity might be such a moderator. Relatively little research has yet addressed the role of supervisors' mindsets. In the present study, I therefore looked at the relationship between supervisors' diversity mindsets and team performance. In an on-line survey, 258 workers (18-65 years old) from 44 teams of a company in the manufacturing sector and their supervisors rated leader-member exchange, the quality of interpersonal relationships, their diversity beliefs, and aspects of contextual and core task performance. Supervisors' diversity beliefs were positively associated with leader-member exchange (LMX) initiated by supervisors. Differential effects of LMX emerged, however, depending on the type of fit between supervisors' and team's diversity beliefs. Positive supervisor beliefs only went with lower levels of relational conflict and higher performance if teams held positive diversity beliefs. Also, supervisors' negative diversity beliefs were partly buffered by positive team diversity beliefs, whilst negative team beliefs were associated with lower performance regardless of supervisors' beliefs. Consistent with previous research, it appears that diversity beliefs exert a substantial influence on the relationship between age diversity and team performance. More specifically, the fit between team's and supervisors' beliefs is of importance, as different types of fit produce different performance outcomes. Most importantly, equipping supervisors with

positive beliefs might not be sufficient to overcome negative effects of age diversity as negative beliefs on the team level might cancel the effects of supervisors' beliefs. Further research in this direction might help conceptualise age diversity trainings.

Keywords: diversity, teams, age diversity, leader-member exchange, performance

Driver stress and fatigue: From theory to intervention

Chair(s): MATTHEWS, G. (University of Cincinnati)

Discussant(s): SUMMALA, H. (University of Helsinki)

This symposium addresses recent developments in psychological understanding of driver stress and fatigue, and their implications for safety interventions. A theme of the symposium is that both stress and fatigue are multi-faceted constructs. Thus, a detailed theoretical understanding of these psychophysiological states is needed to support practical countermeasures. The first presentation, by Ann Williamson, provides an overview review of recent research on fatigue and performance. Although the adverse impact of fatigue on safety is widely accepted, a number of research issues remain to be resolved. Key issues are the lack of detailed understanding of fatigue effects, the need to discriminate different causes of fatigue, the role of individual differences, and the problems of transitioning simulator-based research into the real world. Next, Gerald Matthews et al. report on a study investigating the interplay between fatigue, stress and vehicle automation, in which the opportunity to use automation was manipulated. Results are consistent with previous findings suggest that automation may actually exacerbate fatigue, and alternative approaches to intervention that enhance driver task engagement may be needed. Simon Smith addresses perhaps the most dangerous manifestation of fatigue, sleepiness during driving. Fatigued drivers are often advised to rest, but there has been little research in support of more specific recommendations. A simulator study showed that a nap break was more effective in countering sleepiness than an active break. Benefits were evident in EEG and subjective measures, and in a behavioral measure of hazard perception. In the final presentation, Dwight Hennessy describes a study of the relationship between trait driver stress and preferences for "personal space" around the driver's vehicles. It was found that stress relates to a greater space

preference, especially in congested conditions, and in older drivers. This finding is interpreted in terms of needs for a safety buffer around the vehicle, rather than a need for perceived control. Heikki Summala will act as discussant. Learning objectives for the symposium include elucidating the role of psychological theory in supporting practical safety interventions, highlighting recent empirical findings on driver stress and fatigue, and comparing different methods for evaluation of driver competence and safety.

Fatigue and performance effects: What do we know and what do we need to know?

WILLIAMSON, A. (University of New South Wales)

This paper presents a review of current knowledge of fatigue effects on driver performance. Fatigue is identified as a serious problem for safe and efficient performance in many settings, but especially transportation. The main object of our concern about fatigue is the evidence that it has adverse effects on safety. For example, higher fatigue has been linked with increased crashes on the road and especially crashes with higher severity, resulting in deaths. Underlying these adverse safety outcomes are fatigue-related changes in performance. Understanding these changes is a key to preventing the harmful effects of fatigue. Unfortunately, our knowledge of the effects of fatigue is lacking in a number of notable areas and this includes having a clear view of the nature and range of performance effects of fatigue. This paper will summarise current knowledge of the effects of fatigue on performance, and focuses on some of the areas of research need. First, there is little consensus on the actual effects of fatigue on performance. Are some performance functions more affected than others? For example, there is debate on whether fatigue affects simple or more complex functions. Second, there has been no review of different causes of fatigue: whether fatigue that is sleep-related, time of day related or task related, produces similar effects on performance and whether and how these different causes interact to affect performance. Third, individual differences in the effects of fatigue

are clearly important and there is evidence that they account for a large amount of variability in performance effects, but is this the most important issue and in any case, does it signify temporary individual state or a more trait-related phenomenon? Finally, much of the research on the effects of fatigue on performance involves laboratory or simulator studies where the implications of poor performance are not dire so the effort directed to the task simply will not be the same as in real world conditions. Unfortunately, there have been few attempts to link laboratory and simulator evidence to the effects on real-world performance.

Keywords: *fatigue, driver performance, transport, complex functions, crashes*

Fatigue, stress and the automated vehicle

MATTHEWS, G. (University of Cincinnati),
NEUBAUER, C. (University of Cincinnati),
LANGHEIM, L. K. (University of Cincinnati), SAXBY,
D. J. (University of Cincinnati)

Technological advances are increasingly supporting automation of vehicle operation, but the impact of automation on the fatigued and/or stressed driver has not been adequately explored. Previous studies in our driving simulator lab suggest two relevant conclusions. First, a study of stress showed that automation reduced workload but not distress induced by threats to vehicle control. Second, fatigue responses take different forms, and 'passive fatigue' induced by prolonged monotony appears to be especially dangerous. Automation may induce passive fatigue, leading to loss of alertness when the driver must resume full control. This study aimed to extend these previous findings by investigating whether the choice of using automation or not is related to the driver's state of fatigue. 190 drivers (mean age: 20.2) participated in a simulated drive lasting 35 minutes, which was configured to induce fatigue rapidly. Half the sample were given the option of assigning vehicle operation to an automated system, for five min intervals, whereas the remainder drove normally. In the last five minutes, all participants drove normally, and were required to react to an emergency event, a vehicle pulling out unexpectedly in front of the driver.

Various scales were employed to assess the driver's personality, and states of stress and fatigue before and during the drive. The study largely replicated previous findings that automation may accentuate subjective fatigue symptoms and reduce alertness to traffic events. It was found also that having the choice available tended to elevate fatigue and stress, and that pre-drive fatigue was associated with using automation, when permitted. Systematic individual differences in fatigue response were also observed. Findings add to concerns about providing automation to fatigued drivers. Data suggest a possible vicious cycle whereby fatigue encourages use of automation, which in turn exacerbates fatigue, distress and loss of alertness. Automation may encourage the reactive, effort-minimizing strategies typically adopted by fatigued drivers, lowering driver safety. Designers of in-vehicle systems need to address how to maintain driver engagement and active regulation of personal safety.

Keywords: *vehicle operation, fatigue, stress, automation, personal safety*

The effect of sleepiness on hazard perception skill when driving

SMITH, S. (Queensland University of Technology)

Sleepiness when driving is a major contributor to road crashes, with a high fatality and injury cost. We have shown previously that sleepiness impacts on hazard perception latency, a critical driving skill. Having a nap is one potential countermeasure to sleepiness. Further, 'taking a break' after two hours of driving has become a public policy strategy to reduce sleepiness-related crash risk. The benefits for hazard perception performance of either a nap opportunity or a break have not been demonstrated. Twenty young-adult drivers completed a three-hour simulated drive on a hazard perception task. They did this on two occasions, one week apart. The test sessions began either at 9am or at 1pm (fixed within individual), with all participants arising at 5am on the test day. After 2 hours on the task, they had either a nap opportunity (25 minutes in total) or an 'active break' opportunity (that included a 10-minute standard walk test). The order of the two

conditions was counterbalanced across the participants. Participants then completed the third hour on the task. Sleepiness was assessed with EEG by standard criteria and by self report on the Karolinska Sleepiness Scale. The primary dependent variable was mean hazard perception latency during each hour on the task. Sleepiness increased across the initial two-hour simulated drive. Both the nap opportunity and the 'active break' resulted in decreased sleepiness during the third hour of driving when compared to the second hour of driving. The reduction in sleepiness (by both EEG power spectrum criteria and on self-report) was significantly greater after the nap opportunity. There was substantial inter-individual variation in sleepiness, capacity to nap, and change in sleepiness. A nap break appears to have greater benefit for reducing sleepiness, and improving hazard perception latency, during a sustained drive than does a break without a nap. It remains possible that an active break could reduce other aspects of 'fatigue' that can occur during longer drives. The capacity for individual drivers to take a nap when sleepy, and potential strategies to improve this capacity, needs to be further investigated.

Keywords: *sleepiness, road crashes, hazard perception, fatigue*

Drivers' space preferences: Effects of stress proneness, age and congestion

HENNESSY, D. (Buffalo State College)

More than 20 years ago, Marsh and Collett argued that personal space extends beyond the physical boundary of the vehicle, which can impact on the nature and outcome of interactions with other drivers. Personal space "preference" may be manifested as a desire to have other vehicles remain at a distance from the drivers' own vehicle. The aim of the present study was to examine the possibility that drivers develop a preference for a degree of "driver space" around their vehicles and that this is related to a trait of driver stress susceptibility. A simulation method was used to subjectively measure space preference in front of and behind their vehicle. Using a paper and pencil simulation (a vehicle was shown from an aerial perspective in a 2 lane

roadway), participants were asked to indicate how far from their vehicle they generally prefer other vehicles (in front and behind) in either low or high congestion conditions (using random assignment for congestion condition). They also provided trait stress, desire for control, and demographic information through self report questionnaires. The size of driver space preference was measured as the distance indicated by the participants from the front and rear of the simulated vehicle. Trait driver stress x age and trait driver stress x congestion level predicted driver space preference both in front of the behind the vehicle. Specifically, both older stress prone drivers and stress prone drivers in high congestion indicated greater space preference in front of and behind the vehicle. Desire for control did not predict driver space preference. Given the link with trait driver stress and the lack of relationship with desire for control, it appears that driver space preference is not as much a function of control as a safety buffer issue. Stress prone drivers may be focused more on others and perhaps prefer more buffer space to minimize stress/danger from other drivers.

Keywords: *driving, stress, simulators, personal space*

Drivers' hazard perception

Chair(s): VELICHKOVSKY, B. (Dresden University of Technology)

Discussant(s): PREECE, M. (The University of Queensland)

An important cognitive component of driving is drivers' hazard perception. Drivers' hazard perception is the ability to anticipate potentially dangerous traffic situations. Hazard perception is the only driving-specific skill that has been found to relate to drivers' crash risk across studies; drivers with poorer hazard perception have more crashes on average. Traffic psychologists have long been engaged in researching this important aspect of driver skill as an avenue for improving road safety. This Symposium will include speakers from 5 of the leading hazard perception research groups. As the speakers come from several countries (namely, the United Kingdom, Germany, Turkey, Japan, and Australia), the Symposium will cover research undertaken in a range of traffic environments. The speakers' individual presentations will discuss: (1) which groups of drivers are at most risk for having poorer hazard perception (Paper 1: Novice drivers, Paper 4: Older drivers, Paper 5: Learner drivers); (2) what cognitive mechanisms underlie hazard perception (Paper 2: Spread of search, gaze duration; Paper 3: Eye movements to differentiate stress, fatigue and mode of visual attention); (3) how drivers appraise risks when driving (Paper 1: Self-reported perceived risk; Paper 2: Failure to correctly appraise risk; Paper 4: Classification of potential risk in driving scenes); (4) different approaches to assessing hazard perception skill (Paper 1: Videos of real driving scenes and self-assessment; Paper 2: Videos of real driving scenes and eye tracking; Paper 3: virtual reality driving simulator, dual-task paradigm, and eye tracking; Paper 4: On road driving test, driver head movements, and videos of real driving scenes; Paper 5: Videos of real driving scenes). Attendees at this symposium will gain a broad overview of current research in hazard perception, with specific attention to the four themes presented above.

Discriminating novice and experienced drivers using actual driving hazard videos in specific risk domains

BERFU, A. (Middle East Technical University)

Novice drivers are particularly vulnerable to road crashes because of their poor hazard perception skills (HPS). The type of hazards drivers are exposed to may change depending on a number of factors, such as road conditions, and novices have heightened vulnerabilities to specific hazards, such as the ones occurring in a distance. Therefore, assessment of HPS in specific hazard domains is critical for effective training. We aimed to compare novice and experienced drivers in four domains: moving hazards joining from the left and right sides, hazards in the opposite and own lanes, using moving hazard scenes from actual traffic environment. We also investigated if self-reported HPS and driving skills predict video-based hazard perception latencies in these domains. 185 Turkish drivers were administered video-based real-life hazard perception test developed by researchers, and short measures of self-reported HPS and driving skills. Results revealed that novice drivers performed significantly worse than experienced drivers in hazards especially occurring in the right side of the road and opposite lane, but not in the those occurring in the own lane, after controlling for age. The pattern of the correlations between self-reported HPS and video-based HP latencies in four hazard domains yielded mixed results suggesting that self-reported assessment do not have an accurate basis in predicting HP latencies, especially for experienced drivers. Previous findings suggested that novice drivers have undeveloped scanning strategies and they fail to search for the sides of the road, especially when the hazard is developing from the left. Our results were consistent with the earlier findings in terms of the hazards occurring in the opposite lane. However, inconsistent with the earlier findings, right-side hazards were more dangerous for Turkish novices. This study suggests that along with poor scanning strategies, low levels of perceived risk is also crucial for labelling hazardous situations, and we predict that

opposite lane and right side hazards were more underestimated by novices.

Keywords: novice drivers, driving hazard videos, hazard perception, traffic environment, hazardous environments

Why do car drivers pull out in front of motorcyclists? Using hazard perception clips to assess whether car drivers look at, perceive and correctly appraise approaching motorcycles at t-junctions

THÖRNELL, E. (The University of Nottingham)

The primary cause of car-motorcycle collisions in the UK is a car pulling out of a side road onto a main carriageway in front of an approaching motorcycle with right-of-way. Do these errors occur due to a failure to look at the motorcycle, a failure to process the motorcycle, or a failure to correctly appraise the risk presented by the approaching motorcycle? It is our aim to assess the relative contributions of these 3 potential causes in such scenarios. Hazard perception clips representing nearly 180° of forward view were recorded from a moving vehicle and edited with mirror information inset. These clips were presented to three groups of participants (novice drivers, experienced drivers and dual drivers who both drive and ride motorcycles) across three large screens. Participants undertook a combined hazard perception task and a sanctioning manoeuvres task, where the latter required participants to press a button when they thought it was safe to pull out a t-junction. T-junction clips were presented with either an approaching motorcycle, an approaching car, or without a conflicting vehicle. Participants' eye movements demonstrated group differences in the spread of search on approach to the junction. Current analyses will also determine whether some participants were faster than others to spot approaching vehicles, and how this relates to their decision times to sanction the manoeuvre. Time to fixate the approaching vehicle relates to whether participants look, the subsequent gaze durations on target indicate whether the approaching vehicle was then perceived, while the button response to pull out reflects their appraisal of the risk. Crucially we will be able to say whether these

behaviours differ for approaching cars and motorcycles. Initial results suggest differences in the way drivers scan junctions, while subsequent results should identify more precisely where the driver's behaviour breaks down with an approaching motorcycle. On the basis of these results we will propose training interventions for drivers.

Keywords: car-motorcycle collisions, hazard perception, eye movement, group differences, risk

Hazard perception and mental workload in simulated driving: From eye movement analysis to neurocognitive mechanisms

VELICHKOVSKY, B. (Dresden University of Technology)

Experts in human factors engineering and applied cognitive research are in search for a reliable methodology for an on-line assessment of attentional state of persons working in hazardous environments. We present data from an ongoing research project on the cognitive, emotional and neuropsychological bases of human risk behaviour. The main aim of this project is to build a model of risk behaviour in hazardous conditions, so that we will be able to predict decisions made in the face of uncertainty and risk. The objective of the present study was to look for individual differences in hazard perception during a static driving simulation and their relationship with driver functional states as related, on the one hand, to fatigue and to different modes of attention, on the other. Participants were tested in the SIRCA static driving simulator and behavioural measures were obtained during different potential hazard situations applying a singular and a dual task paradigm. A mental workload test was administered as a subjective rating of driver state. Eye movement parameters were measured using Eye Link II (500 Hz) video-based eye tracking system. The results show that the analysis of eye movements, and in particular the temporal aspects of saccades and fixations, can provide rich information about driver's attention and the course of behaviour in hazardous situations. In particular, eye movement data do differentiate stress, fatigue and mode of visual attention. Based on these findings and earlier results

related to diagnostics of different modes of visual attention (ambient vs. focal – see Velichkovsky et al., 2002, 2005), we are now trying to develop an ‘early fatigue-and-distraction warning system’ in order to reduce the risk of accidents by the fast assessment of driver’s functional state in real traffic conditions. In a more general vein, we plan to assess the possibility of generalization of this approach to other hazardous situations and professions.

Keywords: *human factors engineering, attentional state, hazardous environments, risk behaviours, driver state*

Investigation of elderly drivers’ hazard perception and driving performance

RENGE, K. (Tezukayama University)

The present study focused on the relationship between elderly drivers’ skill for perceiving traffic hazards and their driving performance. The investigation was conducted in three driving schools in Japan. Participants totalled 95 drivers (mean age of 71.7 years, 68 males and 27 females), who were divided into younger-elderly (from 65 to 70 years old), middle-elderly (from 70 to 75 years old), and senior-elderly (over 75 years old) groups. The participants completed a driving circuit and then a hazard perception test. The frequencies of drivers’ head movements were counted as a measure of drivers’ searching behaviour. The fifteen traffic scenes and one training scene were videotaped by a high-definition camera (Victor JY-HD10). After viewing each scene, the participants answered questions about possible hazards in each scene. The hazards were divided into three types: obvious hazards (OH), potential hazards (PH), and hazards relating to prediction of other road users’ behaviour (BH). A total of 57 hazards were included in the test, of which 12 were classified as OH, 28 were PH, and 17 were BH. Hazard perception scores demonstrated a significant effect of age group ($p < .05$). The senior-elderly group had lower scores than other two age groups. The main effect was especially shown for potential hazards ($p < .01$). The significant relationships were found between frequencies of head movements and hazard perception scores ($r = .425$, $p < .01$), and the scores of PH

($r = .455$, $p < .01$). Senior-elderly drivers could have deficits in perceiving potential hazards such as crossing cars, bicyclists and pedestrians from dead zones of roads. The participants with lower hazard perception scores had lower driving performance (fewer searching head movements), which means that the participants who do not understand the importance of potential hazards could show less searching behaviour on intersections.

Keywords: *elderly, hazard perception, driving performance, head movements*

The development and validation of a hazard perception test for use in driver licensing

WETTEN, M. (The University of Queensland)

Drivers’ hazard perception skill refers to a driver’s ability to identify dangerous situations on the road ahead. Designing a test that is able to distinguish between drivers of different levels of hazard perception ability is not a trivial matter, as demonstrated by a number of tests that have failed to detect differences between high risk (young novice) and low risk (older experienced) driver groups. Hazard perception tests are currently in use in a number of countries to assess drivers for licensing purposes though some have low reliability as measures of hazard perception skill. The pilot study and main study in this paper detail the development of a new hazard perception test used for driver licensing purposes in Queensland, Australia. In the pilot study, licensed drivers with English as a second language were assessed on their comprehension of the video-based instructions for the Queensland Transport Hazard Perception Test. Drivers completed two response time measures, were shown the test instructions, then asked to complete a shortened version of the Queensland Transport Hazard Perception Test. Drivers’ understanding of the instructions was then assessed and three standardized measures of English comprehension were administered. In the main study, a learner driver group and experienced driver group completed two response time measures followed by the Queensland Hazard Perception Test. The pilot study results showed that the video-based

instructions for the Queensland Transport Hazard Perception Test were able to be understood by drivers with an effective English reading age of 10 years. In the main study, learner drivers had faster responses for both response time measures than experienced drivers, but were slower at predicting hazards in the Queensland Transport Hazard Perception Test. No evidence was found of gender, ethnic, income, or educational differences in hazard perception test scores. The results of both studies provide support for the validity of the Queensland Transport Hazard Perception Test and its use in the graduated driver licensing system in Queensland.

Keywords: hazard perception, dangerous situations, risk, validity, licensing system

Drugs, fatigue and driving: assessing risk and developing new methods for detecting driver impairment

Chair(s): STOUGH, C. (Brain Sciences Institute, Swinburne University)

Discussant(s): SWANN, P. (Vicroads/ Brain Sciences Institute, Swinburne University)

Traffic accidents are the single largest cause of deaths by injury worldwide and around 20% of traffic accidents result from driver sleepiness and falling asleep at the wheel. Increases in shift working and trends for reduced sleep length are increasing risk factors for these sleep related accidents, with the young and truck drivers representing particularly vulnerable groups. Drivers are relatively poor predictors of their imminent sleep onset indicating a need for driver warning systems, but effective commercial systems are still some years away. Sleep related vehicle accidents will be reviewed together with potential countermeasures. Research studies will be presented leading to recent developments in providing effective warning systems and countermeasures. Our laboratory simulator studies have shown the impact of sleep loss on performance, with night driving showing impairment that can be worse than driving with alcohol levels above the UK legal limit (0.08 g/dL BAC). A series of research studies has developed a method of categorising driver alertness and sleep status based on psychophysiological measures. The initial system involved ambulatory recording of psychophysiological measures including electroencephalogram (EEG), electrooculogram (EOG) and electromyogram (EMG) measures that provides a way of categorising waking arousal levels from alert to sleep onset and is continuous with standard polysomnographic (PSG) sleep recording. The system has been tested in simulator, controlled track and road driving environments which have demonstrated the sensitivity and reliability of the method. Recent developments have included neural

network and other computer-based automated analysis approaches with a view to providing real-time monitoring and warning systems. Arousal status is determined using simple mastoid placement of EEG electrodes with a view to developing a practical and simple device for monitoring driver sleepiness (for example, incorporated into a pair of glasses or Bluetooth headset). Future steps are to provide a system based on an inbuilt vehicle computer to monitor alertness and other driving parameters. Each driver will have a 'smart card' that holds a unique driver 'fingerprint', including EEG, associated with their normal alert driving and arousal profile. The system will incorporate a warning system to help prevent sleep related accidents.

Early intervention and comorbidity – How do we intervene early with young people presenting with comorbid mental health and alcohol and other drug problems?

Chair(s): RICKWOOD, D. (headspace ACT; University of Canberra)

This symposium considers the issue of how to intervene early with young people presenting with comorbid alcohol and other drug and mental health problems. Intervening early to treat young people with mental health problems, particularly when comorbid with alcohol and other drug problems, is a major focus of current Australian mental health policy. This is in response to recognition of the high level of mental health problems in adolescents and youth and the urgent need to provide early treatment to prevent the development of long-term mental disorders. The learning outcomes for attendees of this symposium are that they will develop: an understanding that the major well-established methods of treatment for alcohol and other drug problems and mental health problems are generally inappropriate in an early intervention context; that service providers are unsure of how to identify and respond to early presentations involving comorbidity; that cannabis, amphetamine-type substances, and alcohol are the main substances of concern for young people presenting early with mental health problems; and that new ways of working effectively with young people around these issues are being developed across Australia, through adapting traditional approaches and using brief interventions and holistic and targeted early treatment approaches.

Early intervention for young people with comorbid mental health and alcohol and other drug problems

RICKWOOD, D. (headspace ACT; University of Canberra), KELLY, L. (headspace ACT)

The established methods of treatment for alcohol and other drug problems (AOD) may not be appropriate in an early intervention context, and in the context of co-occurring mental health problems, particularly for young people. The lack of knowledge in this field had been acknowledged by the Australian Psychological Society, noting that models of early intervention for young people with mental health and AOD problems are not well developed, yet essential to the work of headspace and other innovations in youth mental health service provision. This paper presents the findings of a study investigating the types of therapeutic interventions that are being implemented to intervene early for AOD and mental health problems for youth and adolescents at headspace ACT and other services that intervene early with youth experiencing these problems. Service providers from a range of backgrounds, including youth work and clinical psychology, from headspace ACT and similar services were interviewed to determine the types of interventions they were using with young people presenting with comorbid AOD and mental health problems, the perceived usefulness of these interventions, and the gaps they identified in the knowledge and practice base in this area. The interviews identified a lack of clear understanding of what comprised early intervention for AOD use and that many current therapeutic approaches were inappropriate for experimental and emerging AOD problems in young people. Clear differences were evident in the types of approaches used by service providers with different training backgrounds. However, clear trends were evident in the needs of young people presenting with comorbidity and what were perceived as potentially the most effective models of early intervention. The outcomes of this study identify major gaps in the evidence base regarding effective early intervention for young people presenting with comorbidity, and also indicate future directions

to improve our understanding of the best ways to intervene early in harmful alcohol and other drug use for young people with comorbid mental health problems.

Keywords: *alcohol and other drug problems, early intervention, young people, comorbidity, headspace*

Brief interventions for young people with comorbid cannabis and mental health concerns

HOWARD, J. (National Cannabis Prevention and Information Centre, NDARC, UNSW), BATTISTI, R. A. (National Cannabis Prevention and Information Centre, NDARC, UNSW), COPELAND, J. (National Cannabis Prevention and Information Centre, NDARC, UNSW)

Brief interventions (BIs) have proved to be effective for some adults with problematic cannabis use and, more recently, with young people. However, many young people present to psychologists, other allied health professionals and medical practitioners with significant comorbidities – anxiety and depressive disorders and psychoses. For young people who have comorbid mental health difficulties, their cannabis use can impact on many aspects of their lives, including medication/treatment adherence, social and vocational efficacy, symptom severity and increased admissions to hospital. Given that young people may not readily engage with longer-term interventions, the development of effective brief interventions that address both substance use and mental health are necessary. This presentation will draw on recent work of the National Cannabis Prevention and Information Centre in developing both interventions to address the problematic cannabis use of young people and those with comorbidities. Some of this work has been in collaboration with Orygen Youth Health, a NCPIC partner, and the Brain and Mind Research Institute, and the latter will be used to illustrate the current research and preliminary outcomes. These brief interventions aim at increasing insight into how cannabis use affects the young person's life, as well as enhancing motivation to change cannabis use behaviours, whether decreasing or cessation of use, or increasing control over

current levels of use. A further aim is to increase the young person's willingness to discuss their cannabis use in the context of their mental health difficulties, particularly with health professionals from whom they receive ongoing care. Such interventions are therefore intended to serve as adjunct treatments to treatment as usual and are a conduit for discussion of cannabis use within regular sessions.

Keywords: *brief interventions, cannabis use, young people, comorbidity*

Can earlier intervention with amphetamine users prevent an escalation of use or relapse following treatment?

MAGOR-BLATCH, L. (University of Canberra), COPELAND, J. (National Cannabis Prevention and Information Centre, NDARC, UNSW), HOWARD, J. (National Cannabis Prevention and Information Centre, NDARC, UNSW), PITTS, J. A. (Odyssey House McGrath Foundation)

From 1993 to 2007, Australia saw a dramatic and significant increase in the use of Amphetamine-Type Stimulants (ATS), rising from 5.4% in 1993 to 9.1% of the Australian population in 2004. While the figure had decreased to 6.3% in 2007, this still represents 1.1 million Australians, or 7.7% of males (0.7 million) and 4.9% of females (0.4 million) over 14 years of age. Use of Ecstasy continued to increase over the whole reporting period, from 3.1% in 1993 to 8.9% in 2007. Increased use of ATS, and especially methamphetamine, is especially worrying since the use of ATS has been shown to have serious consequences for both physical and mental health, including increased heart rate, blood pressure, sleeplessness and reduced appetite. Mental health issues include aggression, violence and accidents resulting from unsafe behaviours, such as unsafe driving. In view of the high dependency properties of ATS and the physical and mental health effects which may result from its use, early intervention is suggested to prevent an escalation of use or relapse following a period of treatment. Extensive consultations in Australia and New Zealand during 2008-2009, revealed considerable concern by treatment agencies in accessing evidence-based treatment interventions to

work with this population group. An ATS-specific treatment protocol resulted from these consultations and an outcome study is currently being conducted with 10 agencies across Australia. The treatment protocol is part of a comprehensive package including clinical assessment, together with tip sheets and worksheets to accompany the seven session intervention. It is aimed at increasing awareness of the effects of ATS use, assessing motivation for change and providing understanding of the mind-body connection and increased mental health problems, such as anxiety, which result from ATS use. This presentation will provide early information from the study. It is believed the intervention will have applicability as an early intervention with ATS users to prevent uptake with both outpatient and residential treatment populations.

Keywords: *amphetamine-type stimulants, ecstasy, methamphetamine, early intervention, treatment agencies*

Family therapy and cognitive-behavioral therapy for youth with depression, anxiety and substance disorders

BERTINO, M. (Deakin University), LEWIS, A. (Deakin University), TOUMBOUROU, J. (Deakin University), RICCIARDELLI, L. (Deakin University), KNIGHT, T. (Deakin University)

The aim of this study was to compare the efficacy of two psychological treatment modalities for youth depression, anxiety and comorbid AOD problems; to discuss issues of treatment design, training, recruitment, early intervention, and retention of participants as factors within a high quality clinical trial; and to introduce a new assessment protocol developed within the study. Preliminary data from a randomized controlled trial (RCT) will be presented, investigating the treatment efficacy of CBT and Family Therapy for youth with comorbid mental health and AOD problems. The RCT will recruit 100 families and is being conducted across service agencies and at Deakin University, in Melbourne and Geelong. Overall, there is some initial support for the use of these therapeutic modalities as early interventions for youth with comorbid mental health symptoms and AOD use. A review of the

current literature suggests a lack of RCTs to-date, evaluating these approaches for youth and families. Discussion of the preliminary results from this RCT will be compared to existing findings. Discussion will focus on research design and time challenges of implementing high quality studies within existing adolescent service provision. CBT and Family Therapy appear to be efficacious treatments for youth mental health, but require more rigorous evaluation. Randomized controlled trials are desirable, yet difficult to implement with this population in 'real world' settings. A team of Deakin University researchers funded by beyond blue: the national depression initiative are currently implementing such a trial. Preliminary results are promising and innovative methods have been devised for assessing and engaging youth with comorbid mental health and AOD problems, and their families.

Keywords: family therapy, cognitive behavioural therapy, randomized controlled trial, comorbidity, alcohol and other drug problems

Economic decision making: Rationality and moral aspects

Chair(s): TYSZKA, T. (Kozminski University)

Discussant(s): WEARING, A. J. (The University of Melbourne)

The focus of this symposium is understanding economic behavior and in particular the psychology of decision making. One of the most cited models in this field is prospect theory. The first two papers of the symposium deal with this theory. One of them concerns a possible extension of prospect theory from monetary to non-monetary dimensions like pain, waiting time, life expectancy, etc. Results indicate that the theory is also valid for these non-monetary dimensions. Another component of prospect theory, the probability weighting function, was studied in the second paper. Findings show that the shape of the probability weighting function is related to the format that probabilistic information is presented to the decision maker. There seems to be several advantages of using the experience-based format for communicating probabilistic information. Taken together, these results once again demonstrate theoretical advantages of prospect theory. The two other papers are focused on how people make economic decisions associated with moral questions. Studies seem to show that the strength of emotions evoked by violating a moral norm influences both moral judgments and moral choices. Under strong emotions moral judgments become consistent with deontological position, while under weaker moral emotions they become consistent with the consequentialist position. Stronger moral emotions evoked by a violation of a moral norm make people less sensitive to changes in the values of outcomes and probabilities of material consequences. The sensitivity to outcomes and probabilities of material consequences indicates the decision maker applies a compensatory decision rule, while insensitivity to these parameters indicates applying a non-compensatory decision rule. Moral aspects in economic decision making are also studied in experimental games. Research shows that very

young children (between three and four years) are generally selfish. However, older children (seven years old) develop a sense of what is fair and what is not. The results of the research presented here show that one of the determinants of fairness in children's choices is the structure of the game. The three key learning objectives are: decision making, rationality, and moral aspects.

Can Prospect Theory be generalized to non-monetary dimensions

ZAKAY, D. (New School of Psychology IDC Herzeliya)

Prospect Theory is in principle a psychophysical model. Kahneman and Tversky themselves suggested that the predictions of the theory should be relevant for perceptual dimensions and not only for the monetary one. However, the theory was tested mainly in regard to money. In the present study, the generalization of prospect theory in the case of non-monetary dimensions (e.g., weight, waiting durations, pain, life expectancy etc.) was tested. In addition, the validity of prospect theory's predictions for large amounts of money was also tested. This is an important test, since many psychophysical functions, collapse in face of extreme values. Implications for understanding economic behavior in general and regarding non-monetary dimensions in particular are discussed. A series of experiments were carried out with different scenarios containing monetary and non-monetary dimensions like weight, waiting durations, pain, and life expectancy. The findings indicate that the predictions regarding regular amounts of money were replicated. However, a phenomenon termed "overcertainty" was found for dimensions which have a special meaning for survival. Accordingly, participants tend to prefer certain alternatives, even under risk conditions, in order to minimize survival threats. It was also found that whereas the predictions of prospect theory were valid when tested on group levels this was not the case on an individual level. In general, the theory was found to be valid for the non-monetary dimensions and for large amounts of money.

Keywords: *prospect theory, money, economic behavior, psychophysical functions, non-monetary dimensions*

Determinants of the probability weighting function

IDZIKOWSKA, K. (Kozminski University)

According to prospect theory, when making decisions under risk people overweight low probability events and underweight high probability events. However, recent studies show that the probability weighting function may be dependent on the format of probabilistic information. The first purpose of this research was to find out whether the inverse S-shaped weighting function becomes more linear when the experience-based (instead of numerical) probability format is used. The second purpose of the study was to check whether the shape of the probability weighting function is related to other studies of frequency judgments which show that rare events are overestimated and frequent events are underestimated. The experiment was completed under two formats of probabilistic information. Under the so-called experience format, participants observed a series of outcomes and learned about the payoffs and chances of obtaining them. Then they judged the probability connected with a higher outcome of the lottery. Under the description format, participants just learned the numerical value of probability. In the last stage subjects in both groups chose certainty equivalents for the lotteries. The probability weighting function was estimated according to the CPT model and nonlinear least squares regression was performed. Additionally, the probability weighting function under experience condition was estimated with the respondents' subjective probabilities instead of objective ones. The results confirm the hypothesis that probability weighting function is more linear under the experience than under the description-based probability format. For instance, the curvature parameter of the one-parameter probability weighting function under the experience condition equals 0.64, whereas under description it equals 0.51. Moreover, the parameter becomes even higher (0.76) when instead of objective, the judged probabilities are computed. It was

confirmed that that the probability weighting function depends on what format probabilistic information is used. Moreover, we found that overweighting low probabilities is mainly due to the misperception of probability.

Keywords: *prospect theory, probability weighting function, probabilistic information, description-based probability, nonlinear least squares regression*

Moral emotions, moral judgments, and moral choices

MACKO, A. (Kozminski University)

The main purpose of the research was to discover how people make economic decisions associated with moral questions. First, we investigated whether people are consequentialists or deontologists in their moral judgments. In particular, the relationship between the strength of an affective reaction to the violation of moral norms and the nature of moral judgment was studied. Then, we focused on the relationship between the strength of an affective reaction to the violation of moral norms and how people resolve conflicts between moral sentiments and economic self-interest. In a series of experiments both process- and outcome-based methods were used. Respondents were presented with scenarios associated with moral questions and were asked to make (moral) judgments and choices. Respondents' decision time and information searching were also registered. We found that people tend to take the deontological position when violating moral norms that evoke strong negative emotions, and they tend to take the consequentialist position when violating moral norms that evoke weaker negative emotions. We also found that people were more sensitive to changes in the values of outcomes and probabilities in those scenarios where violating moral norms evoked weaker negative emotions than in scenarios where violating moral norms evoked more intense negative emotions. An additional hypothesis is still being tested to find out if respondents in scenarios associated with stronger emotions are searching for less information about the choice situation than in scenarios associated with weaker emotions. Generally, our findings

are consistent with the choice model where the decision maker first tests the strength of the moral sentiment associated with violating a given moral norm. When it is not very strong, trade-offs between moral and materialist consequences of the alternative are examined and the decision maker follows the compensatory decision rule. On the other hand, when the moral sentiment associated with violating a moral norm is strong and the material consequences do not produce a significant temptation, the lexicographic rule with primacy of moral values is applied.

Keywords: *economic decision-making, moral judgments, moral norms, emotions, choice model*

Selfish and social preferences in young children: The role of gender and socialization

MACKO, A. (Kozminski University)

The main goal of this research was to examine selfish and social preferences in two groups of children (6 and 11 years old). We also examined whether gender differences in social preferences found in adults are also present in choices made by children. The experimental procedure from the research by Fehr et al. (2008) was used. Each child participated in three sessions and was paired with another anonymous child. In treatment one ('prosocial'), the participant could choose between two allocations: (1,1), i.e., one for the participant and one for the other child, and the allocation (1,0). In treatment two ('envy'), the choice was made between the allocations (1,1) and (1,2). Finally, in treatment three ('temptation'), participants made choices between the allocations (1,1) and (2,0). Children played for real payoffs (various stickers). The results obtained can be summarized in the following way: (1) Children tended to make fair choices in two of the three treatments, i.e., the 'prosocial' treatment and the 'envy' treatment. However, in the 'temptation' treatment, the choices became more unfair. (2) We found that children were aware they made unfair choices in the 'temptation' treatment. Most of them agreed that if they had made fairer choices in treatment three their partners would be happier. (3) Girls revealed more prosocial

preferences than boys but this difference disappeared in the 'temptation' treatment. (4) The recipient's gender did not affect participants' choices. This result is consistent with developmental psychology theories. (5) No differences were found between choices of children who attended or did not attend a pre-school playgroup. However, we found that socialization not associated with a pre-school playgroup did affect participants' social preferences. Participants who had more frequent social contacts with other children made fairer choices than participants who met other children less often. The main results replicated the findings of the study by Fehr et al. (2008), showing a cross-cultural stability.

Keywords: children, social preferences, selfishness, prosocial behaviour, preschool

Ecstasy (MDMA): Psychological and health related implications for its users

Chair(s): MURPHY, P. (Edge Hill University)

Discussant(s): SCHOLEY, A. (Swinburne University)

This symposium will present findings concerning the implications for psychological functioning and health following the use of the black market drug 'ecstasy', which contains the synthetic amphetamine derivative 3, 4-methylenedioxymethamphetamine (MDMA) as its defining psychoactive ingredient. MDMA is known to disrupt brain serotonergic functioning in humans, although the permanence or otherwise of such disruption remains a matter of debate and continuing research. Furthermore, ecstasy users have been reported to show impairments to psychological health and cognitive performance. In extreme but rare cases, psychotic episodes and death, respectively, have been reported as linked to ecstasy use. The popularity of ecstasy use in a number of countries makes research into its effects of great public importance. Paper One will present findings from the Australian Ecstasy and Related Drug Reporting System (EDRS) concerning the psychological well being of ecstasy users with regard to such things as mood stability and sleep patterns, and explore the relationship of ecstasy use and its effects to personality variables such as impulsivity. Physical health will also be examined. Paper Two will compare studies of the psychophysiological stimulation and mood enhancing effects associated with ecstasy use from laboratory and real world settings, respectively, in order to elaborate upon our understanding of the behavioural and environmental variables which may enhance the long-term harms associated with this drug. Paper Three will present preliminary findings from a systematic review of studies of visuospatial memory functioning in ecstasy users, highlighting some of the variables which may account for inconsistent findings in this field. Paper Four will present important new findings concerning MDMA related impairments

in driving performance. The three key learning outcomes for those attending and participating in this symposium may be described as enhanced awareness and understanding of: 1) Ecstasy related harms, with particular regard to health, cognition, and driving performance; 2) The behavioural and environmental variables which may exacerbate ecstasy related harms; 3) The impact of ecstasy use on the executive processes of working memory as shown, for example, in visuospatial memory and driving performance.

The health and wellbeing of frequent ecstasy consumers in Australia

BRUNO, R. (University of Tasmania)

There has been an increase in the use of 'ecstasy' (3,4-methylenedioxymethamphetamine) in Australia in recent years, to the extent where almost one quarter of 20-29 year olds have tried the drug. Despite the high prevalence of use, there are relatively low numbers of presentations to health and drug treatment services relating to ecstasy use, and little available data on the health of ecstasy consumers. The Ecstasy and Related Drug Reporting System (EDRS) is a national monitoring system designed to identify emerging changes in patterns of ecstasy and 'club drug' use and in their associated drug markets. This presentation will describe the physical and psychological health of ecstasy consumers contributing to the EDRS and the factors associated with their involvement in risky health behaviours. Convenience samples of frequent (at least monthly) ecstasy consumers in each Australian capital city were interviewed in relation to drug use, health, and involvement in health-risk behaviours. Annual cross-sectional interviews have been conducted between 2003 and 2009, each comprising approximately 800 individuals, supplemented by examination of external population-level indicators of ecstasy use such as treatment presentations. While these frequent ecstasy consumers are generally well-functioning, there are subgroups engaging in riskier patterns of drug use and who experience health harms at greater rates. Psychological distress in these participants is

elevated in comparison to the general population and is associated with use of ecstasy in binge patterns (extended periods of use without sleep) and use of other drugs such as cannabis. Dependence in relation to ecstasy and other psychostimulants is apparent in a notable minority. Involvement in risky health behaviours such as drug driving is associated with problematic drug use patterns, and also individual factors such as impulsive personality traits and perception of risk. Binge and high risk alcohol use has dramatically increased over time, which negatively contributes to health problems. Health harms are apparent in a notable proportion of these frequent ecstasy consumers. However, these are largely hidden as consumers are not presenting to traditional treatment services. Innovative health interventions are required to better engage and address the harms experienced by this population.

Keywords: *ecstasy, ecstasy and related drug reporting system, risky health behaviours, Psychostimulants, drug treatment services*

Real world versus laboratory studies of Ecstasy/MDMA users: the importance of total bio-energetic stress

PARROTT, A. (University of Swansea)

The recreational drug MDMA or 'Ecstasy' shows stimulant properties in the laboratory. However in real world studies of dance clubbers and ravers, MDMA can generate more extreme hyper-stimulation, which can occasionally prove life-threatening. The total 'bio-energetic stress' from this powerful stimulant drug, coupled with environmental stimulation from multiple sources, may provide the core integrative factor. Controlled doses of MDMA have been administered to human volunteers in a number of laboratory studies. Recreational Ecstasy/MDMA users have also been monitored in a number of real world studies. The findings from these studies will be summarized and reviewed. In each laboratory MDMA study, a well defined profile of psychophysiological stimulation has been described, although it is rarely extreme or disabling. In real world studies, the degree of psychobiological stimulation can be far more pronounced. For instance in the laboratory,

MDMA leads to a 150% increase in the stress neurohormone cortisol, whereas dance clubbers on-MDMA show an 800% acute increase in cortisol. In the laboratory, core body temperature can be increased by around +0.30C to +0.60C following moderate-high doses, whereas in real world studies of dance clubbers, core body temperature can be increased by +1.00C or more. The mood effects of Ecstasy/MDMA are also generally much stronger in real world studies, than in the laboratory. This may reflect the combined effects of stimulant drug, prolonged physical exertion, and environmental factors such as noise and overcrowding. Elsewhere I have argued that Ecstasy/MDMA users may be enhancing the acute effects of this drug by taking it in the hot and crowded conditions. However, by increasing the bio-energetic stress of the organism, the longer-term neuropsychobiological consequences may also be increased. It is important to investigate the effects of recreational drugs, such as MDMA, in real world studies. The cumulative bio-energetic stress, from both drug and non-drug influences, may be the crucial factor for understanding any longer-term changes in neurobiological integrity and psychological health.

Keywords: *ecstasy, mdma, recreational drugs, bio-energetic stress, psychophysiological stimulation*

The effects of ‘ecstasy’ (MDMA) on visuospatial memory performance: Preliminary findings from a systematic review

MURPHY, P. (Edge Hill University)

To review findings from studies of the effects of ‘ecstasy’ (MDMA) consumption in humans on visuospatial memory performance. Such performance has been demonstrated to draw upon executive working memory resources. Initial searches of the Psycinfo and Medline databases using appropriate search terms yielded 140 studies. This was reduced to 39 studies for inclusion in the review by applying inclusion criteria requiring studies to have human participants, to be published in peer-reviewed journals in the English language, and to report new findings concerning ecstasy use and visuospatial memory performance. Review

articles and dissertations were excluded. The majority of studies tested participants who were not under the drug’s influence when tested. Seven studies involved the laboratory-based administration of MDMA prior to testing, and one included measures taken after illegal consumption. Ecstasy related performance deficits were reported for both currently abstinent users, and those under the drug’s influence. The use of more than one visuospatial task and multiple task measures prevented a simple count of studies reporting deficits or not. Tests of visuospatial memory administered were assigned to two broad categories: those testing recall for specific spatial elements of stimuli, such as the order of sequentially highlighted computer generated grid squares (Type One tasks); and tests requiring the recognition or reproduction of visual patterns (Type Two tasks). For Type One tasks, ecstasy related deficits were more likely on tasks requiring additional processing beyond the basic requirements of acquisition, retention and retrieval (e.g. reporting the reverse of an observed sequence). No immediate explanation for inconsistent findings regarding performance deficits on Type Two tasks was apparent with regard to estimated ecstasy consumption or time since last use. With few exceptions, all studies took steps to minimise the impact of potential confounds, most notably the influence of other drugs used. There is evidence for ecstasy related impairment of visuospatial memory performance, although this may be linked to the total executive workload imposed by a task. Researchers should consider the type of executive processes recruited, and total workload, in administering visuospatial tasks, as an aid to reconciling inconsistent findings. The review continues.

Keywords: *ecstasy, mdma, visuospatial memory, working memory, executive function*

The effects of MDMA and methamphetamine on driving performance

STOUGH, C. (Swinburne University)

This study aimed to examine the relationship between positive drug tests and driving impairment after the consumption of

methamphetamine and MDMA. We tested 61 participants (29 female and 31 male) aged between 21 and 35 years ($M = 25.34$ $SD = 3.26$). All participants were in good health, had a valid full drivers license (no probationary or learner drivers) and were recreational drug users. The project consisted of three experimental sessions that involved the consumption of 100mg of MDMA, .42mg/kg Methamphetamine, and placebo. Each experimental session incorporated an acute testing phase at 3hours post-drug administration as well as a follow up at 24 hours post-drug to assess any residual affects the drugs may have on performance. The 3 sessions were double blind, counter-balanced and placebo controlled. At three hours post drug administration participants drove for approximately 20 minutes through four different scenarios: freeway traffic day time driving, city traffic day time driving and then repeated during night time conditions. For this study, a subset of 33 variables was analysed, each reflecting an error that can occur during the driving tasks. A series of repeated measures ANOVAs were conducted to compare driving errors during the placebo, methamphetamine and MDMA conditions. Blood samples were taken before drug administration (to ensure participants were drug free at the time of testing), at 3 hours and at 24hours, immediately before the driving task in each session. Performance on the following measures were significantly worse when under the influence of MDMA three hours post drug (when compared to placebo): Signal changes, dangerous action skidding, inappropriate braking, safe following distance, speed in the city and overall driving score. Performance on the stopping brake measure was significantly worse when under the influence of methamphetamine three hours post drug (when compared to placebo). Driving performance improved at 24 hours post-drug administration compared to 3 hrs in the MDMA and methamphetamine conditions. Driving performance is significantly impaired on a number of driving variables when intoxicated by MDMA. Less impairment was observed in the methamphetamine condition, this may be attributed to the stimulant effects of small doses of methamphetamine administered.

Keywords: *methamphetamine, MDMA, driving impairment, driving performance, drug tests*

Education and coping: Teaching coping skills in diverse educational contexts

Chair(s): FRYDENBERG, E. (University of Melbourne), ISRAELASHVILI, M. (Tel-Aviv University)

Discussant(s): YOUNG, R. (University of British Columbia)

The role and importance of teaching coping skills in promoting children's positive mental health has been highlighted in numerous educational and psychological studies. Currently, one of the major challenges is to find ways to teach coping skills to children of different developmental stages and/or who are living in various environments. This symposium will present several explorations of the relevance and utility of teaching coping skills to children of various ages. Several intervention programs in which current knowledge on teaching coping skills has been applied will be presented and their utility and limitations will be discussed. The presentations will address children of different ages, of different cultures (i.e., Australia and Israel), and within different contexts (e.g., sexual harassment, cyber-world). Participants in the symposium will be supplied with several take-home messages regarding the best ways to intervene in the pursuit of promoting children's coping skills. Moreover, some generalizations that emerge from the different applications of current knowledge on young people's coping skills will be offered. Finally, new perspectives on the scope and ways to promote children's coping skills will be outlined. This will be done both within each of the presentations, as well as in the discussant's reflections, that will conclude the symposium.

Coping competencies in the early years: Identifying the strategies that preschoolers use

FRYDENBERG, E. (University of Melbourne), DEANS, J. (University of Melbourne)

This study, the first of a three-phase exploration, sought to understand the coping actions of four to five year old children. In particular it sought to identify the ways in which children describe their coping and how parents' descriptions concur and amplify those of their children. The participants in the project were twenty children attending a three-day a week preschool program and their parents. The sample consisted of four to five year old ($M = 4.6$ years) inner-city Australian children, nine males and eleven females ($n = 19$) and their parents ($n = 17$). The 5-8 minute child interviews were used to identify the range of responses that children had available to them to describe their coping in particular situations. Questions 1-6 of the parent survey related specifically to Separation, Communicative Problem Solving, Independent Problem Solving, Social Skills, and Adaptability. In question 7 parents were provided with a list of 27 coping strategies and asked to rate whether their child used each strategy 'Never, Sometimes, or A Lot'. Both the child and parent responses were grouped into Active, Passive and Relational coping. The twenty child interviews provided 36 different coping responses that were categorized as Active ($n = 20$), Passive ($n = 7$), and Relational ($n = 9$). The finer-grained groupings such as, 'play', 'talk it through', 'say sorry', 'ask for help' etc, kept close to the Adolescent Coping Scale groupings wherever possible. Overall, children spontaneously provided more coping strategies than those listed in the parent survey and children reported using more active coping than passive coping. In Phase 2, 46 four to five year old children were asked to describe their coping strategies when dealing with seven age-appropriate challenging situations. The results again indicated that preschoolers could articulate coping strategies that were then theoretically clustered into productive and non-productive coping styles. In Phase 3, parents and teachers completed 112 surveys for 46 children relating to their coping. Mothers reported more passive coping for their children than did the teachers. Overall there are indications that there are a wide range of coping strategies that young children commonly adopt that are not widely recognized in current literature. Parents'

perceptions of their child's coping vary from that of teachers and children themselves.

Keywords: *coping, children, preschoolers, parents*

Engagement in schooling: resources and coping

MCKENZIE, V. (University of Melbourne)

This study aimed to investigate coping and resilience in students who struggle to maintain their attendance in mainstream education due to difficulties in learning and behavior which require specialized interventions. These interventions had in common removal from a mainstream school for a specified number of weeks, with intensive work on a set of skills and attitudes. The outcomes of this approach in terms of resilience and coping scores were evaluated as indicators of positive aspects of this educational practice. The study used a mixed methods approach. Students, teachers and some parents were interviewed. All students completed a set of questionnaires at three points in their program - on entry to a specialized program, at the end of the program, and approximately 6 months later. Students utilizing this intervention demonstrated shifts in some aspects of resilience and reduced their non-productive coping. These changes were sustained over a period of six months post program. Many students did not return to their original school, but most successfully reconnected with the education system following a change of school. Students consistently articulated a greater motivation for improving their educational outcomes. The students tended to see themselves as resourced and coping across the data collection points, although their teachers rated them as lacking resources and demonstrating many difficulties. There were changes on student responses in mastery as an element of resilience, which supports the need for ensuring students have opportunities to express competence whether they are strong or weak academically. Non productive coping also declined over the measurement period. The cohort was consistently rated high on attention problems although this was not the original reason for referral, which points to the range of problems that were addressed in these programs. The teaching staff dealt with

problems in learning alongside significant mental health issues, making programming a challenging process. Consequently, carefully structured research can be difficult when the programs tend to be customized to the particular group, and idiosyncratic to the specific teachers. Implications of the findings are discussed in relation to achievement and engagement in schooling, as well as programming for the vulnerable and under resourced.

Keywords: *coping, students, school, engagement in schooling, educational outcomes*

The dual relationship between the prevention of adolescent sexual harassment and coping skills acquisition

ISRAELASHVILI, M. (Tel-Aviv University), SHAMIR, M. (Tel-Aviv University)

The purpose of the current study was to explore the role of coping skills acquisition in the prevention of adolescents' sexual harassment. Namely, the study explored the extent to which coping skills shape perceptions of sexual harassment and/or are shaped by a change in such perceptions. In order to do so, an intervention program was constructed in which the following issues were discussed: gender stereotypes, knowledge on sexual assault, attitudes toward sexual assault (myths that support rape), empathy towards the victim, ways of coping with stress, seeking help, discovery of the secret (an assault), communication between the genders and summary of the program. A total of 29 boys and 42 girls (ages 14-15 years) learning in four 9th grades parallel classes participated in the study. Out of the four classes, two classes consisting of 34 students, served as the intervention group, and the other two classes served as the control group. The Pre-Post measurements included students' level of knowledge about sexual harassment, students' acceptance of gender stereotypes and myths related to sexual assault (known as rape myths), students' ways of coping with stress, and students' possible reactions to a hypothetical incident of sexual assault that happened to an acquaintance/friend. The study findings indicate that students in the intervention group expanded their actual

knowledge on sexual harassment, acquired less myths and stereotypes related to sexual harassment, and reported more productive coping with incidents of sexual assault. In addition, following the exposure to an intervention in the context of sexual harassment, male adolescents reported more use of both problem-focused and emotion-focused ways of coping in general. The main conclusion arising from this study is that a structured intervention program is an effective tool that contributes to, and brings about, positive changes in students' perceptions of sexual harassment. Moreover, it seems that though the intervention focused on sexual assault, its implications can be further generalized to adolescent's general coping strategies, especially among male adolescents. Implications for prevention of sexual harassment and the role of coping skill acquisition during adolescence will be discussed.

Keywords: coping skills acquisition, sexual harassment, adolescents, sexual abuse

Teaching to cope productively: A cyber bullying intervention

LAM, C. (Hong Kong Society for The Protection of Children), FRYDENBERG, E. (University of Melbourne)

Whilst millions of adolescents are involved in online activities many have become victims of cyber harassment. To date, there is little research that has investigated the outcomes of teaching cyber safety and its relationship in increasing the resilience of adolescents in the Cyberworld. It is anticipated that those adolescents who are directly taught to cope productively will be less likely to suffer the short and long term adverse effects of bullying compared to those without these skills. It is believed that the teaching of online safety would also yield a similar positive outcome. This project investigates how a program teaching coping skills (Best of Coping Program) (BOC) and a program teaching cyber safety (Cyber Savvy Teens Program) (CST) can optimize adolescents' capacity to cope online. Thirty-three adolescents were divided into three groups: Control, BOC and CST. Participants completed a questionnaire on

cyber knowledge and habits pre-program and completed the Adolescents Coping Scale, the Kessler Psychological Distress Scale pre- and post-program. Participants also completed a program evaluation form post-program. There was a significant improvement in emotional well-being (as measured in K-10) from pre- to post-program for both groups (BOC and CST group). Coping and emotional well-being produced marginal improvement pre- to post-program.

Qualitative data (i.e. open-ended questions in program evaluation forms) provided a link between the programs (both extended BOC program and CST program) and the changes in adolescents' thoughts, feelings and behaviors. This finding provides further evidence that pre- to post- program differences found in this study were linked to the program provided. Participants in both program groups demonstrated improvements in their overall mental health and in making better online choices post-program. The BOC program was found to be a better program than CST alone to improve general coping, whereas the CST program was better at tackling cyber specific issues. In summary, this result provided primary findings suggesting that the extended BOC program and CST program had improved adolescents' ability to make safer online choices. Both programs are also effective in enhancing aspects of coping, emotional well-being and feelings in dealing with negative online events.

Keywords: adolescents, cyber harassment, cyber safety, coping

Education and training of psychologists

Chair(s): PANDEY, J. (Central University of Bihar)

Discussant(s): SILBEREISEN, R. K. (University of Jena)

This symposium is planned to highlight importance and progress of the IUPsyS Project on "Education and Training of Psychologists" with objective to review very broadly status of psychology education at different levels (High School, College/University), training (practical training and internship) and practice including accreditation process in different regions of the world. It may not be possible to cover all regions and all aspects of education and training. The presentations will identify strengths and weaknesses in psychology, education, training and practice in varied socio-cultural and economic contexts across the world. Evolution of norms leading to quality psychology education and training would facilitate development of psychological science capable to deliver best possible for the welfare of mankind and also to pursue high quality scientific research for its advancement. The example of status of Psychology in the South Asia will be discussed.

The EuroPsy standard of education and training in Europe

PANDEY, J. (Central University of Bihar)

EuroPsy is a European standard of education and training that enables professional psychologists to be recognized as having a European-level qualification in psychology. There were two stages in the development of EuroPsy. The first stage, which began in 1999, was EuroPsyT "A framework for education and training of psychologists in Europe" which was accepted by EFPA (the European Federation of Psychologists' Associations) in 2001. This project analyzed the courses, required and elective, at the undergraduate and graduate levels in a number of European countries. The findings indicated strong similarities of the

required courses at both levels, with variations in the elective courses according to the culture and interests of the countries. This project is similar to the proposed project of IUPsyS. The second stage was the development of EuroPsy, whose purpose was to set a quality benchmark of education and practice in psychology, and therefore to protect the public, and to improve mobility for psychologists among countries in Europe. It is based on a 5 year education and training in psychology, at least 3 years of bachelor level and 2 years of postgraduate level, and includes 1 year of supervised practice. The three broad professional contexts (and a fourth category for those who do not fit the others) are education, clinical & health, organization & work. It offers psychological associations a benchmark of quality of professional qualifications. EuroPsy was approved by EFPA in 2009, and is issued by EFPA through the National Accreditation Committees of 32 national psychological associations in Europe, representing approximately 180,000 psychologists.

Keywords: *EuroPsy, education, training, Europe, professional qualifications*

Education of psychologists in Eastern Europe and Russia

GEORGAS, J. (The University of Athens)

The system of psychological education in the countries of Eastern Europe was under a substantial pressure for modification since the political transformations of the 1980-1990s. The national systems of higher education made a more or less heavy departure from the Soviet model in the beginning of the 1990s (or were to be built completely a new in the newly emerging countries). Also, the advancing processes of globalization and changes in the global economic situation had forced many countries to be concerned with the modernization of national educational systems. For instance, many countries of Eastern Europe (including Russia) entered the Bologna process, accepting the obligation to switch to the two-stage educational system. Furthermore, after the fall of ideological constraints there were a constant increase in the demand for psychological services. However, in parts of East Europe psychology as a practically

relevant discipline was relatively less developed. Thus, the curricula of East European universities had to be changed accordingly, and quality-ensuring systems for psychological services (through accreditation and licensing) were to be created. East European countries have made different progress in resolving these issues, often taking different routes in re-shaping the national systems of psychologists' education and training. In this presentation, the current practices of psychologists' education will be reviewed for several representative East European countries. An attempt will be made to identify similarities and differences between the approaches chosen by different countries, as well as the weaknesses and strengths of the approaches. Conclusions will be drawn about the plausibility of applying globally developed standards for psychological education in East European countries (with a special emphasis on respecting the specifics of national educational systems and the preservation of the identity of national psychologies).

Keywords: *psychological education, higher education, Eastern Europe*

Psychology education and training in Southern Africa

VELICHKOVSKY, B. B. (Moscow State University)

In Africa psychology education and training does not appear to have been benchmarked outside of English-speaking Southern African countries. For instance, Namibia, South Africa and Zimbabwe all have dispensations which require a minimum of a Masters level of training and where education standards are nationally determined. Furthermore these countries have national regulatory/licensing bodies, and legislation protects the title psychologist and defines psychological acts. This experience is different to many other African countries. Although most African universities are statutory creations, enjoy autonomy, and receive public funding, psychology tends to be a lower priority confronted as these institutions are with issues such as poverty, disease, natural disasters, and wars. The setting of education and training guidelines by the Union would thus assist many of these countries in attaining the necessary

statutory protection for the title psychologist. This will in turn facilitate the development of the discipline, enhance its stature and visibility on the African continent, and increase its ability to assist underserved communities. The current state of psychology education and training in Southern Africa will be addressed within this context.

Keywords: *psychology education, training, Africa, education standards*

The education of psychologists in Southeast Asia: A preliminary report on the five original ASEAN countries

WATTS, A. D. (Entabeni Hospital)

Psychology is relatively young in the Southeast Asian Region, where most professional psychology organizations are younger than 50 years. As such, most of the features of the system of educating psychologists are still evolving within the individual countries, and convergences have yet to emerge within the region. For example, analysis of existing policy documents and accounts of existing practices indicate that there is still no consensus regarding what should be the minimum level of educational attainment of a psychologist (master's or bachelor's degree). The level of state regulation of the psychology degree programs also varies significantly across the region, and between state and private degree-granting institutions within the countries. Thus, although there seem to be similar curricular requirements, there is no guarantee of substantive equivalence among the seemingly similar requirements. However, one common feature of most curricular programs in psychology in the five original ASEAN countries is the emphasis on the more applied areas of psychology (counseling, counseling, industrial-organizational). So far, recognition of psychology degrees from other ASEAN countries has been minimal. These attempts highlight the need for greater convergence of the curricular requirements for the education of psychologists in the ASEAN, particularly as the ASEAN countries are committed to opening their professional labor markets to each other starting 2015. Other challenges related to a common set of educational requirements (e.g., different lengths of basic education cycle,

different higher education systems, etc.) are also discussed.

Keywords: curricular programs, ASEAN countries, education of psychologists, educational requirements, higher education

Keywords: education of psychologists, training, curricular standards

In search of a global reference frame for education and training in psychology

BERNARDO, A. B. I. (De La Salle University), GOH, C. L. (Help University College), NAIR, E. (Work & Health Psychologists), SUHAPTI, R. (Universitas Gadjah Mada)

Psychology as an academic discipline is undergoing change in various directions. On the one hand the theoretical profile becomes more complex due to the integration of other perspectives, such as the neurosciences but also the social sciences, and sometimes this is discussed as a paradigm change that endangers the coherence of the discipline. On the other hand new fields and modes of application emerge beyond the traditional domains of psychologists' activities concerning work and health. Such developments require models for the education, training, and work of psychologists that go beyond past tradition. Whereas in some regions of the world curricular standards and professional profiles were developed and implemented, in other regions of the world this is not the case. Rather than simply taking over what worked for others, important questions of the adequacy of such references for psychology in these regions come up. After all academic curricula are known to reflect the codes and values of the dominant scientific view. Therefore one has to find a match between what is affordable for a country and what is needed in order to become a resource in the international discourse of psychology. Achieving this requires objective information about psychology education and training worldwide, followed by an attempt to filter out what needs to be shared by all. In order to implement such a model in the future, the value of psychology as a science and a field of application need to be communicated to policy makers, employers, and other stakeholders. It is the responsibility of an international learned society such as IUPsyS to initiate and moderate such a process.

Effects and effectiveness of interventions in environmental psychology

Chair(s): KRAEMER, S. M. (Eawag: Swiss Federal Institute of Aquatic Science and Technology)

Since its founding, environmental psychology has been concerned with eliciting or changing pro-environmental behaviour. To accomplish that, psychological interventions have been designed, implemented and tested. This symposium is presenting structured approaches to examine various intervention techniques using different models. When looking at interventions, two aspects are important for analysis. First of all, their effectiveness needs to be examined. That means, pre- and post-measures before and after interventions should be surveyed to receive a clear indication for the effectiveness of the intervention. The comparison of a group that receives an intervention with a group that does not, also gives a good indication for effectiveness. The effects of the interventions should be examined by analyzing which theory-based constructs are being changed and how they are changed through interventions. In a theory-based approach, the Transtheoretical Model is applied to solar water disinfection. Another presentation shows the effects of spoken prompts on plastic bag use implementing the dual motivation model. Persuasion as a theoretical framework was applied to study the effects of egoistic appeals on checking tires. One presentation shows how an educational program has been used to change environmental perception. The background here was the "Two Major Environmental Values" model. Finally, a conceptual model is presented that provides a theoretical framework to analyze behaviour change interventions. All presentations are examining different aspects of the effectiveness and the effects of interventions for behaviour change.

User types and interventions in the behavior change process of adopting a sustainable innovation in Zimbabwe

KRAEMER, S. M. (Eawag: Swiss Federal Institute of Aquatic Science and Technology)

The current research intends to show that the adoption of solar water disinfection (SODIS) underlies a behaviour change process, i.e. that user types can be found that match the stages of the Transtheoretical Model of Change (TTM). These user types shall be differentiated by several psychological factors derived from TTM. Additionally, different interventions shall be shown to affect various psychological factors, which are discriminative for the respective user type. Rules are set according to the TTM that aid in classifying user types. The developments of certain factors per user type are compared with the help of general linear models (GLM). Used psychological factors are need, attitude, intention and habit. GLMs also help to identify which interventions affect which factors (derived from the Theory of Planned Behaviour: attitude, subjective norm, perceived behavioural control, intention and habit). The following user types according to the TTM can be identified: Non-users (precontemplation), fluctuators (contemplation), late beginners (preparation), irregular users (action), regular users (maintenance) and relapsers (relapse). These user types are found to be discriminated by different psychological factors: Need, attitude and intention differentiate between non-users and fluctuators, intention between fluctuators and late beginners and habit between late beginners, irregular users, regular users and relapsers. Additionally, need distinguished between irregular and regular users. It can also be shown that different interventions have effects on different factors: promoters, prompts and public commitment affect attitude, subjective norm, behavioural control, intention and habit. Pass-on-tasks (promoters request people to pass on information to others) affect attitude, subjective norm and intention, whereas knowledge dissemination with dissonance arousal (promoters highlight the difference between target and actual behaviour) only affects attitude and perceived behavioural control. An implementation

intention contract showed to affect subjective norm, behavioural control, intention and habit. To identify user types according to a behaviour change theory helps to match interventions to the respective user types. Since different interventions affect factors that are differently successful according to the targeted user type, these findings are important for and will be applied to campaign planning. Identified factors can help to move people from one stage to the other.

Keywords: *solar water disinfection, behaviour change, transtheoretical model of change, general linear models, campaign planning*

The effect of prompt by bespeaking on pro-environmental behavior: an intervention study for reducing plastic bags at supermarkets

OHTOMO, S. (Konan Women's University),
OHNUMA, S. (Konan Women's University)

This study implemented a field study to reduce plastic bags at supermarkets. The dual motivation model was examined with the intervention, which proposes that pro-environmental behaviors were determined by two motivations. The usage of plastic bags would be more affected by unintentional process than intentional process, if there is no intervention. However people would intend to refrain from using plastic bags, if they are given a cue from the cashier. This study examined the effects of the bespeaking as a kind of prompts for promoting pro-environmental behavior. We hypothesized that the bespeaking-prompt would reduce usage of plastic bag behavior by inducing an individual's intentional motivation and inhibiting their unintentional motivation. A field study was implemented in supermarkets in Japan. In the first week, there was no intervention to set the baseline, i.e. shoppers are given free plastic bags from the cashier. In the second week, cashiers bespoke to shoppers whether they wanted plastic bags or not. The shoppers were asked to answer the questionnaire just after they went through the checkout counter. They could take the questionnaire home and send it back by mail. The number of respondents obtained were 448 in the control condition (the first week) and 435 in the bespeaking

condition (the second week). The difference in attitude for using plastic bags between the two conditions was not found. However, the injunctive norm, perceived behavior control, and intentional motivation were higher in the bespeaking condition, while descriptive norm, hesitation, unintended motivation, and using plastic bags were higher in the control condition. Moreover, the effect of unintentional motivation on using plastic bags was stronger in the control condition. On the other hand, the effect of intentional motivation on the behavior was stronger in the bespeaking condition. The results suggested that the bespeaking activated a deliberative and conscious decision about using plastic bags, hence the intentional motivation was salient and unintentional motivation inhibited. This study succeeded in demonstrating the effect of the prompt by bespeaking and the usefulness of the dual motivation model of pro-environmental behavior.

Keywords: *plastic bags, supermarkets, pro-environmental behaviour, bespeaking, motivation*

When egoistic appeals backfire: persuading drivers to check their tires

BOLDERDIJK, S. W. (University of Groningen),
STEG, L. (University of Groningen), GELLER, E. S.
(Virginia Polytechnic), LEHMAN, P. K. (Virginia
Polytechnic)

There are typically two ways via which marketers promote pro-environmental behavior. Biospheric appeals promote pro-environmental behavior via referring to the intrinsic value of nature and the environment: energy conservation should be pursued because it benefits the environment. Egoistic appeals, conversely, stress that acting pro-environmentally is in one's self-interest: energy conservation should be pursued because it saves money. Environmental campaigns often opt for egoistic appeals, assuming that appealing to self-interest is necessary to achieve behavior change. However, drawing upon prior research, we reasoned that when promoting low-cost pro-environmental behaviors, biospheric appeals may actually be more effective than egoistic appeals. Our aim was to test this proposition. We tested the effects of biospheric and egoistic appeals on

tire pressure checking behavior, both in a survey study, as well as in two field experiments. In the field experiments, we presented different appeals to patrons of a local gas station. Student assistants recorded patrons' tire pressure checking behavior. Results from two field experiments support the notion that biospheric appeals might be more effective in promoting low-cost pro-environmental behavior than egoistic appeals. Specifically, in Study One, we found that biospheric appeals are more effective in motivating drivers to get a tire pressure check than egoistic appeals. In Study Two, we found that egoistic appeals even de-motivate pro-environmental behavior. In a survey study, we tested whether Aronson's interpretation of cognitive dissonance theory (1992) could account for the results: people might be motivated to act on biospheric appeals, and avoid acting on egoistic appeals in order to preserve a morally good sense of self. Biospheric appeals may be more effective in promoting low-cost pro-environmental behaviors than egoistic appeals. Implications for environmental campaigns are discussed.

Keywords: pro-environmental behaviour, energy conservation, biospheric appeals, egoistic appeals, environmental campaigns

Changing long-term adolescents' environmental perception through short-term educational programs?

BOGNER, F. (University of Bayreuth), WISEMANN, M. (University of Bayreuth)

A questionnaire battery designed to measure the factors Utilization (U) and Preservation (P) in the field of adolescent environmental perception was applied within the context of an educational program within a National Park. The intervention lasted for one day or one week, both were monitored via pre- and post-testing. Maximum likelihood factor analysis confirmed the two hypothesized orthogonal factors U and P of the 2-MEV model (Two Major Environmental Values) as sets of related attitudes. Thus, all participants could be allocated with regard to their scores in U and P by assigning them to quadrants including P+ and P-, U+ and U-. Consequently, due to the two test cycles changes within this allocation

were monitored. The weeklong education program consisted of an extra-curricular unit in a field centre within a National Park. The program caused a shift within the scale of environmental perception, preferably occurring in the consistent direction of favoring nature and the environment. Scores on the higher-order factor of Preservation (P) increased, those on Utilization (U) decreased. Comparisons with the control group confirm the impact of the program. Differences between the pre-test scores of the control group and the treatment group were not significant; differences between the post-test scores were highly so. For both, the degree of change for the Preservation and Utilization scores to the pre-intervention scores, summarized as the regression line running through the cluster of points marking the position of each individual. In both cases, a clear regression downwards from left to right appears – the lower the pre-intervention score, the greater the degree of change. Both shifts within our pre- and post-tested variables are discussed in the context of three related studies using the same empirical survey instrument. (Bogner, 1998, 1999, 2002; Bogner & Wiseman, 2004). Particularly in the area of environmental education concern has always proceeded beyond the imparting of knowledge to changing adolescent attitudes, and even modifying their long term environmental behaviour. The 2-MEV model yielded the further advantage that intervention studies throughout the series are comparable, since the core of the instrument has remained constant.

Keywords: utilization, preservation, adolescent environmental perception, environmental education, environmental behaviour

Explaining effects and effectiveness of interventions in campaigns by applying a new behavior change model

MOSLER, H. J. (Eawag: Swiss Federal Institute of Aquatic Science and Technology)

The goal of this study is to review behavior change research on the basis of a new conceptual model about behavior change in populations aimed at campaigns. The model is based on Transtheoretical Model (Prochaska &

DiClemente, 1983), Theory of Diffusion of Innovations (Rogers 2003), Health Action Process Approach (Schwarzer, 2008), and Theory of Planned Behavior (Ajzen, 1991). The model is then used to analyze projects about campaigns which targeted to change behavior in populations. The conceptual model differentiates between five processes: attention and comprehension, persuasion, decision, implementation, and habituation processes. Each of these processes involve factors which require corresponding intervention techniques. The behavior changing techniques have to be combined with dissemination interventions to be influential in the whole target population and not only in single individuals or groups. The behavior change processes lead to behavioral determinants. These have to be favorable to the new behavior to generate the new habitual behavior, meaning that this behavior is performed constantly and nearly automatically when the corresponding situation arises. For the review, behavior change campaigns documented in research articles, project reports, and manuals are analyzed on the background of the conceptual model. If indicated, shortcomings and gaps are identified, which could have led to insufficient outcomes of the campaigns. Only very few projects are backed up with behavior change theory and very few determine which psychological factors they aimed to achieve behavior change. Further the analysis shows that many campaigns stop at the point when people show the targeted behavior the first few times but do not take into account that the behavior has to be implemented as a habit. Mostly, relapse prevention is not provided and dissemination strategies are not designed and applied in a well planned manner. Literature review reveals the necessity of theory based behavior change campaigns. It seems to be decisive for the success of campaigns to i) arrange dissemination strategies compatible with the applied behavior change techniques ii) include habit building techniques and iii) to implement relapse prevention strategies.

Keywords: behaviour change, campaigns, transtheoretical model of change, theory of diffusion of innovations, theory of planned behavior

Electro-Mobility in megacities: Will driver behavior or mobility patterns change?

Chair(s): KREMS, J. (Chemnitz University of Technology)

Discussant(s): SYMMONS, M. (Monash University)

Today we have to face a decreasing accessibility of resources paired with a growing demand for them. Thus, the crucial challenge for the future will be to minimize energy consumption and to expand the usage of renewable energies. Striving for these goals also means organizing the increasing mobility in an environmentally sustainable manner. On the one hand people will have to adapt their driving behaviour in such a way that they contribute to minimize greenhouse gas emission even when driving conventional cars. On the other hand automakers raise their eco-credentials by putting in high effort on designing alternative drive concepts and bringing them on the market. Especially for metropolitan areas electric vehicles (EVs) are repeatedly discussed as an equivalent substitute for conventional internal combustion engines. Nevertheless the battery, the limited range and ecological issues still play a crucial role when discussing a possible market launch. Based on experience in several large scale field studies, the symposium will deal with important issues connected to the new technology. Also psychological methods to assess the potential and acceptance of electric mobility in everyday use will be focused. The main research questions addressed by the symposium are: 1) what expectations do drivers have concerning the new technology? 2) how important is the ecological benefit of an E-vehicle for the user? 3) how is the car used in everyday life? 4) what are the constraints for the infrastructure? The symposium will integrate results from four field studies that are currently conducted worldwide. These are the largest studies on electric vehicles done until now. Andreas Keinath will give results from a one-year study in Berlin with more than 100 drivers. Peter Cocron will also report results about driver

expectancies and driving behavior from the Berlin study based on interviews and questionnaires. Tom Turrentine will summarize findings from the field test in Los Angeles (600 users), and Mark Burgess will report data from the London area (50 users). Jana Hoffmanns talk will give an overview on a further study conducted in Great Britain.

Are there differences in the mobility patterns due to BEV?

KEINATH, A. (BMW Group)

Battery electric vehicles (BEV) are gaining currently wide attention from media as well as from research. Nearly every OEM is now working on at least one BEV. BEVs are seen as one of the possible future markets in the automotive industry. Besides the ecological factors of a BEV and their economical importance it is even more surprising that until now there has been so little field data from customer research. Therefore in 2009 and 2010 BMW has started a field trial with its MINI E. This electric Mini is a conversion of a standard MINI with a 220 Nm torque, 0.14 kWh consumption and a nominal range of 240 km. In three countries BMW has issued the MINI E for 600 households in the US, 100 households in Germany and 40 (2x20 private) households together with 20 fleet vehicles in UK. All vehicles in Germany and UK have been equipped with data loggers to be able to compare objective field data how BEV are actually been used with subjective data coming from questionnaires and interviews reflecting users perception. Examples of data that have been logged by the vehicles are single trip lengths, daily driven km, status of the battery, frequency of charging as well as charging times. In addition to that, objective data has been recorded on how people used public infrastructure compared to private charging at their homes. This comprehensive objective database allows us to validate the subjective data gained through subjective methods. The main focus in our presentation will be the validation of concepts like range anxiety or the importance of public infrastructure while using BEV in cities like Berlin or L.A. We will also discuss the objective data from the MINI E compared with data from comparable but

conventional cars. The results show that the BEV is already suited for daily use in big cities. Differences in the usage pattern of a BEV compared to other vehicles seem to be negligible. However, the results also point out possibilities for further development.

Keywords: *battery electric vehicles, economical, cars, mobility, transport*

Expectances and experiences of drivers using an EV: Findings from a German field study

COCRON, P. (Chemnitz University of Technology)

Faced with growing CO₂-emissions, considerable efforts are being made to establish alternative means of transport such as electric vehicles. Aim of the present field study was the development and application of psychologically founded methods to assess the acceptance and the suitability of EVs for everyday usage. Main focus of the research was put on the question how users evaluate restrictions such as the limited range of EVs and how users learn to adapt to the new technology during the course of the study. The study was conducted in the Berlin metropolitan area and is split into two periods of six months, each with a different sample of users ($N = 40$). The participants were interviewed before getting the car, after three months and when returning their vehicle after six months. The research package involved in-depth interviews, thinking aloud, questionnaires, travel and charging diaries and two experimental tasks. By applying such an extensive methodology even slight changes in attitudes e.g., towards the environment and changes in driving behavior can be reliably detected. The subjective data were supplemented by objective data from onboard data loggers which continuously record variables such as speed, acceleration and trip length. When interviewed before the delivery of the car, participants report positive attitudes towards e-mobility, but considerable concerns about the limited range of the car (150 - 200 km). After three months almost all the participants report that the range of the EV is suitable for their daily routes. Additional results from the travel diaries indicate that only a minor percentage of trips cannot be

made with an EV due to EV-specific restrictions such as range and low battery status. Regarding technical innovations such as regenerative braking, users report to have quickly adapted to those. The results indicate that electric vehicles are suitable for the application in metropolitan areas. Changes to the vehicle-driver-system such as regenerative braking are accepted but adaptation processes might occur. Barriers for overall acceptance appear to be psychologically founded and should be addressed accordingly.

Keywords: *transport, electric vehicles, environment, driving behaviour, vehicle-driver-system*

Driving climate change; a case study of electric vehicle drivers in Los Angeles and New York

TURRENTINE, T. (University of California Davis)

One of the more difficult technical challenges related to climate risk is reductions in green house gases in the personal vehicle sector. Personal vehicles are both important practical and very public symbols to drivers of status and other aspects of identity. Market growth in some developing nations like China has been double digit for a decade. The world fleet of vehicles is expected to grow to almost 2 billion vehicles by 2050. This sector is completely reliant on internal combustion gasoline and diesel fueled vehicles, which create a quarter of anthropocentric sources of green house gases. One pathway to reducing greenhouse gases is a transition to electric vehicles (EVs) and renewable electricity. However, EVs have technical limits and advantages for consumers, making their success in the market uncertain. EVs rely on chemical batteries, which are slow to recharge, expensive and store less energy. Depending on size and design, electric vehicles have 60 to 200 kilometers of range before they must be recharged. Then depending on types of recharge equipment and battery size, a fully depleted battery can take many hours to minutes to charge. And yet, electric vehicles have unique refueling systems; drive feel and low emissions capabilities, characteristics that could have appeal to buyers. Thus, the transition to electric vehicle is not a simple market substitution, but could require certain

adaptations, new values, changes in beliefs and lifestyle routines. We report here on results of a one-year study of over 500 drivers of BMW electric vehicles in a unique demonstration project spanning Los Angeles, New York and Berlin between June 2009 and June 2010. Drivers answered multiple surveys, kept diaries, and a subset of 80 drivers was interviewed in detail about their new use patterns and reactions to the vehicles. In particular we rely upon the use of "narratives" to explore consumers' explanations of their lifestyle choices and adaptations. We report here on three essential areas of behavior 1) adaptations to the limited range and long recharge times of electric vehicles, 2) reactions to the driver interfaces, and 3) beliefs about the social and environmental benefits of the electric vehicles.

Keywords: *environment, lifestyle, electric vehicles, green house gases, renewable electricity*

Driving into the future: The expectations and experiences of pioneer ultra low carbon vehicle (ULCV) drivers

BURGESS, M. (Oxford Brookes University)

We report data from the first large scale systematic research into drivers of electric vehicles in the UK. In addition to technological and infrastructure advances, scientists, car manufacturers and the British government aim to use this trial to investigate ULCV driver expectations and experiences. To that end, our multi-method research has enabled us to reveal the psychological processes and practical issues associated with people's initial choices and subsequent usage of ULCVs. Here we focus especially on private users (i.e., those who voluntarily adopted an ULCV for their personal transport) and individual fleet users (those assigned an ULCV to fulfill work duties. Pre- and post- measures were used to gain information about the adoption of ULCVs. Questionnaires were completed at two points. The first data were collected after participants decided to participate in the ULCV national trial, but prior to gaining access to the vehicle. The second questionnaire data were collected after participants had driven their new vehicle for three months. In addition to the quantitative data, we conducted open-ended

interviews prior to participants gaining access to the vehicle, immediately after their first driving experience, and after one week of ULCV adoption. We will present the quantitative changes in participants' confidence in range, expectations of usability, self-reported driving habits, as well as their attitudes to ULCVs, wider environmental issues and electric charging. The open-ended interviews allowed unanticipated user-determined issues to emerge. Consequently we were able to compare drivers' prior motivations and expectations with their descriptions of actual experience. The qualitative data show how drivers report adapting to the handling and infrastructure associated with their ULCV and reveal the way in which their experience, knowledge and opinions developed over time. The data participants have provided are of particular interest as these people are among the first to have contemplated and prepared for the transition from driving a conventional combustion engine car to driving, and engaging with the essential supportive infrastructure for a fully electrically powered vehicle. Our results will contribute to the new field of ULCV psychology research and inform policy on ULCV adoption.

Keywords: *psychological processes, electric vehicles, transport, environmental issues, ultra low carbon vehicle*

Does the use of battery electric vehicles change attitudes and behavior?

HOFFMAN, J. (Daimler AG)

The aim of this explorative survey was to find out the advantages and disadvantages of electric driving. What experiences do users make with a battery electric vehicle? How does it work in everyday life regarding for example range, recharging or performance? Do attitudes and behavior change over time while using an electric vehicle? This accompanying research was implemented within a pilot study in Great Britain in 2008 and 2009 with altogether 46 users of battery electric vehicles. It includes repeated face to face interviews with users in order to find out what they expect from an electric vehicle before they receive it and what their experiences are after having used the car for several months.

Furthermore focus groups were conducted to compare the user's very first experiences with an electric vehicle and their long-term experiences after using the car for one year. Finally an online survey was launched to validate the results. Overall the participants of the pilot study are enthusiastic about the battery electric vehicle – after using it for one year the positive attitude towards the car increases. In contrast to their expectations and their very first experiences they get used to the range and learn that it is sufficient. According to this the confidence in range increases. When receiving the electric vehicle users feel uncertain about mileage but after using the car for a while anxiety on mileage is gone. They learn to handle it and adjust their driving behavior. First rational advantages (environmentally friendly, low running costs) turn into emotional ones: driving electric is easy and fun. The users like that the car is quiet but the long recharging time, the lack of infrastructure and high acquisition costs are still seen as a problem. Attitudes and behavior change over time when using battery electric vehicles. People learn by experience what the car can do and how to handle it. Rational advantages turn into emotional ones. Doubts are reduced and driving behavior changes in order to extend range. Users are more conscious about their journeys now.

Keywords: *battery electric vehicles, attitudes, behaviour change, environmentally friendly behaviour, low running costs*

Emotions at work

Chair(s): ASHKANASY, A. (Professor, University of Queensland Business School)

This symposium focuses on the role of emotions at work, an area of study that is of increasing significance within the wider organisational behaviour domain. The purpose of the symposium is to bring together established and emerging researchers in the emotions area and to discuss not only the current state of the field, but also where it is headed. In line with this aim, the symposium includes both theoretical and empirical contributions, with two papers outlining the findings of recent studies and two papers which present new models/issues for future emotions research to explore. In the first paper, the role of group affective climate is investigated, with results suggesting that affective climate acts as a mediator between leader-member exchange, group level team-member exchange and team performance. The second paper presents a multistage theoretical model of mistreatment at work, with the role of victim appraisal and coping responses emphasized as a potential "missing link" in previous attempts to explain the degree to which experiences of mistreatment negatively impact both individual and organizational outcomes. In the third paper, the potential for positive psychology - including positive emotion - to play an important role in addressing high rates of mental health issues within the legal profession is outlined, with an emphasis on how action now on multiple fronts may facilitate longer term gains that would benefit not only individuals but also the profession, the firms within it, and the wider community. The final paper provides preliminary findings of an ongoing study investigating how employee status may affect the level of emotion work associated with customer interactions, with leaders using deep acting more often and thus managing the stress of emotion work more effectively than other employees. Overall, this symposium will show that the role that emotions play within the workplace is complex; requiring a dedication to research that does not oversimplify the phenomenon. It also

emphasizes the magnitude of the need to understand emotions at work better, given the links to individual, organizational, and societal outcomes. It is this multilevel applied significance that positions emotions research as a field of rapidly rising importance.

Leader-member exchange differentiation, team-member exchange, and team performance: The role of group affective climate

TSE, H. (Griffith University Business School),
LAWRENCE, S. (Griffith University Business School)

Recent research has begun to investigate the implications of leader-member exchange (LMX) theory on team effectiveness (Liden et al., 2006). This line of research results from the increasing recognition that the differential quality of LMX relationships within a team influences individuals' work attitudes and behaviours; therefore understanding its underlying processes has strong implications for team performance (Liden et al., 2006). According to Dienesch and Liden (1986), leaders develop differential quality of relationships with employees within teams because of limited time and resources. The differential LMX relationships in teams appear problematic because employees are sensitive to social comparison information. The resulting altered self-concept may then influence their attitudes to working with their team members (Tyler & Blader, 2003). Based on this notion, we propose two psychological mechanisms – the mediating role of team-member exchange (TMX), and the moderating role of affective climate - to explain how the effects of LMX differentiation on team performance are transmitted through employees' responses to their team members. TMX is defined as the effectiveness of individual member's ongoing working relationships with other team members (Seers, 1989). Affective climate is defined as a shared positive perception among members and the atmosphere that characterize interactions within a team (Choi, Price, & Vinokur, 2003). In this study, our aims are to advance the research on LMX and team performance by developing and testing a team-level model. Specifically, we theorized that group-level LMX differentiation would exert its

impact on team performance through group-level TMX. Group affective climate was hypothesized to moderate the relationship between group-level LMX differentiation and group-level TMX. The model was tested with a sample of 33 workgroups consisting of 243 bank employees. Hierarchical regression analyses showed that the relationship between group-level LMX differentiation and group performance was fully mediated by group-level TMX, and group affective climate moderated the relationship between group-level LMX differentiation and group-level TMX. For workgroups higher in affective climate, lower LMX differentiation among team members was associated with higher levels of TMX. Conversely, for workgroups with lower levels of affective climate, lower LMX differentiation among team members was associated with lower levels of TMX.

Keywords: *leader-member exchange, attitudes, team-member exchange, performance, climate*

Antecedents and outcomes of mistreatment: The mediating role of victim appraisal and coping responses

MICHALAK, R. (University of Queensland Business School)

Workplace mistreatment is a neglected construct in organisational behaviour research. Little is known about how victims are selected, what they do in response to mistreatment including the role of appraisal, and how their responses impact on individual and job related outcomes. After clarifying the definition of mistreatment, we attempt to address this gap in the literature by developing a mediated model that begins with a profile of attractive targets and attractive environments for mistreatment. Our attractive target profile introduces the notion of the 'provocative victim', and includes a number of yet to be explored individual differences such as work locus of control and trait aggressiveness. Our attractive environment profile includes ethical climate, situational power, laissez-faire leadership, organisational change and organisational formalization. We then propose that the mistreatment mediates the relationship between attractive targets and their environment, and victims' appraisals of

the experience, with appraisal then influencing their coping responses. In our model, appraisal is operationalised as the level of negative feelings associated with the experience, and the degree of control the victim perceives they possess to facilitate a change in the situation. Highly negative and refractory to change appraisals are associated with higher levels of stress for victims. We also expand existing coping models to include two new strategies, namely empowered exit (a problem-solving focused coping response) and retaliation (an emotion focused coping response). Taking into consideration the points made by Lazarus (2006) regarding the current tendency to oversimplify research on emotions, appraisal and coping, we suggest that a) appraisal and coping affect the relationship between the experience and the outcomes, and b) victim and situational characteristics influence whether problem-solving focused or emotion focused coping functions are more effective in reducing the impact of the experience on individual outcomes (psychological and health well-being) and job related outcomes (commitment, citizenship behaviour and job satisfaction). We derive a number of propositions from our integrated, mediated model of mistreatment and conclude with suggestions for future research, including testing the proposed model initially using cross sectional designs and - on the premise it is supported - following up with longitudinal studies.

Keywords: *workplace mistreatment, work locus of control, coping models, emotions, organisational behaviour*

Virtuousness in law firms – Positive practices and the bottom line

JAMES, C. (University of Newcastle Law School)

Studies have shown high rates of depression among lawyers, manifesting in suicidal ideation, substance abuse and relationship difficulties. Law societies and bar associations have acknowledged the problem, responding mostly with counseling programs. Depression among lawyers has been associated with a general poor regard for lawyers and a belief that many lawyers are self-interested, incompetent, dishonest or otherwise

unprofessional. This paper discusses potential innovations for legal education and the practice of law which may reduce both dissatisfaction and dysfunction in the profession. Theoretical research in the area of positive psychology raises potential for practical interventions in legal education and training, as well as in organisational structure and function within the legal profession. Positive psychology focuses on positive emotions, character and institutions, and it connects notionally with therapeutic jurisprudence, which includes collaborative law, restorative justice and transformative mediation. Rather than encouraging law students to develop resilience to endure the stressors of legal practice, law schools could inspire students to be agents of positive change, which might lead to institutional change in the future. Rather than providing counseling to service lawyers' mental health issues, law societies might encourage firms to adopt more than merely ethical practices and acknowledge their duty of care for employed lawyers. Rather than merely applying local laws in a commercial environment and rewarding solicitors' unscrupulous billing practices with promotion, law firms could promote working for ideals of justice in the service of community and take a leadership role in law reform initiatives for the broad improvement of society. Organisational virtuousness is no longer a Pollyanna ideal, but can have positive return in outcomes as well as systemic positive change over time. This paper argues that positive legal practice and administration, following the principles of positive psychology, can improve not only lawyer satisfaction and employee retention but profitability, productivity and client satisfaction. The notion of virtuousness surpasses the mere ethical practice of law, which requires compliance with identified professional rules. The potential of taking the next step and applying positive psychology in legal education, and in the often-discredited profession of law, would be significant social and community benefit.

Keywords: lawyers, depression, positive psychology, law schools, emotions

The status of employees in the service sector and its effects on emotion work in customer interactions

BERNHARDT, L. (Goethe-University)

Research on emotion work has focused on how employees regulate their emotions in customer interactions with either positive or negative consequences on well-being and performance. So far, little research has examined differences in emotion work associated with the status of employees. There are conflicting opinions regarding emotion regulation requirements depending on the status: It is stated that leaders have more freedom regarding their emotional expression and thus emotion regulation should be easier for them (Mann, 1999; Sloan, 2004). Others argue that leaders are in a sandwich position and thus are required to display a variety of emotions and to make a lot of decisions regarding which emotions to express (Humphrey, Pollack & Hawver, 2008). Therefore, our aim is to analyze differences between leaders and employees regarding their emotion work processes in customer interactions. We have been conducting a questionnaire study in the German service sector. To date, 35 employees and 24 leaders have participated. The participants have a mean age of 40.34 years ($SD = 12.99$) and 72.9% are female. We used t-tests and covariance analyses to examine the data. The preliminary results regarding the emotional requirements as antecedents of emotion work show a significant difference in the frequency of displaying negative emotions, with leaders having to show them more often. Furthermore, leaders scored significantly higher on customer-oriented attitudes and emotional intelligence. Regarding the emotion regulation strategies, leaders used deep acting significantly more often than employees, even when controlling for length of professional experience. As a consequence of emotion work, leaders showed significantly better stress-management behaviour and self-rated effort. There are significant differences in the emotion work process during customer interactions depending on the status of an employee. Resulting questions to explore include a) whether employees who are more emotionally intelligent, more customer-orientated and better in regulating their emotions are more qualified and thus more likely to become leaders, and b) whether the workplace conditions of leaders (e.g. more scope, more training compared to those of

lower status employees) result in higher emotion work competencies. In the future, more research is needed regarding emotion work of different groups of employees.

Keywords: *emotions, customer interactions, emotion regulation, stress management, leadership*

Emotions in driving - Recent research and theoretical perspectives

Chair(s): UNAL, A. (University of Groningen), LEWIS-EVANS, B. (University of Groningen)

Affective state and the emotions or feelings which accompanying it may influence the way we perceive road situations, our decision-making and our driving behavior. In traffic psychology, some emotions such as anger and hostility have been studied extensively revealing high correlations between state anger and risky driving (Deffenbacher et.al, 2001). However, other emotions that may be experienced during driving, such as being happy, calm, excited, alert, aroused etc. have not been examined in quite as much detail. In traffic, feelings and emotions are also relevant to theories of risk perception (Summala 2005; Vaa 2007; Fuller, 2008). In particular ratings of feelings of risk strongly correlate with ratings of task-difficulty during speed choice (Fuller, 2005; Lewis-Evans and Rothengatter 2009). It is also possible that along with feelings of risk, other emotions such as anxiety, fear or calmness can act as affective signals that are providing information about the traffic environment. This symposium aims to gather recent research findings related to feelings of risk and emotions in driving. In general, we aim to discuss the issue within the scope of the broad theories of driver behaviour, and with reference to theories of affect that guide us in understanding how different emotions may affect risk perception, and willingness to take risks.

Speed maintenance under heavy cognitive load – Implications for theories of driver behaviour

LEWIS-EVANS, B. (PhD / University of Groningen),
DE WAARD, D. (Research fellow / University of Groningen)

No theory of driver behaviour has yet managed to achieve widespread acceptance and use in

the field of Traffic Psychology. In particular the theories differ in terms of their reference to the importance of risk in the control of everyday driving behaviour. There is however a general agreement among theories that if feelings of risk, which also seem strongly related to subjective impressions of effort and task difficulty, increase then drivers should take action to reduce these feelings. Reducing the speed of travel is the most common example of how drivers can effect their perception of these variables. This study seeks to examine how high cognitive load impacts on both the perception of feeling of risk, effort and task difficulty, as well as the ability of drivers to react to increases or decreases in these variables. Participants were asked to initially drive at their preferred speed for 1 minute in a driving simulator. Participant's speed was then automatically increased or decreased by 10 to 30 km/h. Participants were then required to maintain the new speed for two minutes, and for half of this time they also carried out a secondary PASAT task in order to increase cognitive load. Finally participants were asked to again drive for another one minute at their preferred speed. This procedure was repeated seven times, including a control condition where no speed increase or decrease was applied. After every one minute interval verbal ratings of feeling of risk, effort, task difficulty and typicality of the travelling speed were collected. This is in addition to monitoring their speed, lateral displacement and accuracy at the PASAT task. The results are currently being collected and analysed and will definitely be available by the time of the conference. Results will be discussed in terms of their implications for theories of driver behaviour.

Keywords: driver behaviour, traffic psychology, risk perception, task difficulty, cognitive load

Proposing a driver behaviour model based on emotions and feelings: Proposing building blocks and interrelationships

VAA, T. (Researcher / Institute of Transport Economics)

A long-term aim in traffic safety research has been to establish driver behavior models that explain and predict driver behavior. Starting in

1938 with Gibson and Crook's theoretical field-analysis of automobile driving, a large number of driver behaviour models have been proposed over the years. One can, however, hardly say that the task of modelling driver behaviour has reached consensus. One of the main shortcomings is the lack of satisfactory understanding of the mechanisms that could explain the phenomenon of risk compensation. No deep understanding of risk compensation will emerge unless recent developments in cognitive psychology and neuroscience are well integrated in a model of driver behaviour. Hence, an alternative model which especially addresses risk compensation is needed. Several driver behavior models have been reviewed in order to select appropriate elements and processes between elements that may serve as building blocks in the establishment of an alternative driver behavior model. An alternative driver behaviour model, named the Risk Monitor Model (RMM), is proposed. It is argued that one of the main reasons for the disagreements between models is the lack of a deep, and comprehensive understanding of human cognition and emotion, i.e. how drivers think and feel, consciously and unconsciously. Damasio (1996) proposes an un-orthodox definition of emotion and feeling, which makes it possible to distinguish between unconscious and conscious processes that govern (driving) behaviour. Partly based on revisions of aspects of previous models, and partly by incorporating Damasio's Somatic-Marker Hypothesis, a more complete driver behaviour model is proposed. Damasio (1996) states axiomatically, that man's deepest motive is survival. It follows that man must have a risk monitor to survey the dangers that threatens man. It is argued that the body proper itself is the risk monitor. The proposed model also incorporates a separate model of information processing based on Reason, and a model of personality traits based on Ulleberg. Effects on accidents of affective states associated with Attention Deficit/Hyperactivity Disorder (AD/HD), Oppositional Defiant Disorder (ODD) and Conduct Disorder (CD) are discussed.

Keywords: traffic safety research, driver behaviour, risk compensation, cognitive psychology, information processing

Affective state and willingness to take risks

UNAL, A. (University of Groningen), STEG, L. (University of Groningen), EPSTUDE, K. (University of Groningen)

Past studies revealed that positive and negative affect or the emotions connected to them may influence risk-taking (Nygren et.al, 1996; Loewenstein et.al, 2001). With reference to two well-known theories of affect (Forgas, 1995; Schwartz & Clore, 1987), it can be argued that affect may lead people to use different information processing strategies based on expected motivational outcomes. In general, positive affect has been associated with willingness to take risks, while negative affect has been proposed to make people act more cautiously. However, in studies based on gambling tasks, this view has been challenged to some extent, revealing that when the perceived risk was high positive emotions may not always end up with risky decisions (Isen and Geva, 1987; Isen and Patrick, 1983). The aim of this study is to investigate the relationship between emotions and risk taking in the traffic domain. In driving research, effects of affect and emotions were not systematically examined, and some emotions like anger and anxiety were extensively studied while other emotions were partly ignored. In this study, we examined four distinct emotions that systematically vary on the basis of valence and arousal, and we looked at whether these emotions result in different patterns of risk-choice in traffic. In order to induce the targeted emotions, participants first watched short movie excerpts. Next, participants read scenarios describing a dilemma in traffic which required them to choose between a safe versus risky option. Ratings related to the reasons for choosing one of the options were also obtained. Data is still being collected, and the results will be presented on the basis of the differential effects of arousal and valence on willingness to take risks. We expect that emotions high in arousal and displeasure will lead to higher willingness to take risks. Implications will be discussed in relation to traffic safety and driving behavior.

Keywords: emotions, risk taking, information processing, willingness to take risks, arousal

The effects of lead-driver status on the anger-experienced and aggression-expressed while driving

STEPHENS, A. (University College Cork), GROEGER, J. (University College Cork)

There is a growing body of evidence which suggests individuals use status assessments to regulate emotions and behaviour (Allan & Gilbert, 2002; Conway, DeFazio & Mayman, 1999, Lively & Powell, 2006; Lovaglia & Houser, 1996). Further evidence suggests this status effect also occurs within the driving context (Turner & Layton, 1975) with drivers displaying higher levels of aggression toward road-users perceived to be of lower status (McGarva & Steiner, 2000). Two studies investigated the effects of lead-driver status on the anger-experienced and aggression-expressed in traffic scenarios in which the lead drivers' actions were, or were not, determined by an event obviously beyond their control. Study One contrasted reactions to lead-cars bearing Learner driver markings (Low Status) or similar unmarked cars (Control), while Study Two contrasted reactions to Ambulances (High Status) or otherwise identical generic work vans (Control). Reported anger, heart-rate and behaviour were measured while drivers drove. When the lead vehicle slowed or changed course because of the actions of another road user, drivers were reliably more angered when slowed by a learner driver than an unmarked sedan. Drivers reported less anger when slowed by an ambulance, than by a work van, when there was no apparent cause for the lead-vehicle slowing. Driver behaviour also differed according to lead-vehicle status. Drivers allowed greater headway between themselves and a slower ambulance, but drove closer to the work-van, and followed learner drivers at a dangerously close distance, leaving greater headway behind a similar, unmarked car. It is concluded that anger experienced and expressed depends not on the actions of the perpetrator, but on the perceived status of that perpetrator. Higher status vehicles appear to be forgiven their indiscretions more readily even when there are no extenuating circumstances, whilst lower status drivers are blamed more readily for circumstances beyond their control.

Keywords: *emotions, aggression, driving behaviour, anger, learner driver*

Employee health and organisational health: A reciprocal relationship

Chair(s): MCWHA, I. (Massey University)

Discussant(s): FRYDENBERG, E. (University of Melbourne)

This symposium, comprised of members of the Health Division and the Organizational Division of IAAP, will describe the important interaction between physical and mental health and the success of organizations. The manner in which organizations function has a direct bearing on the health of their members and the health of the members directly affects the success of the organization. The first paper will describe the manner in which characteristics of the workplace are related to the experience of stress and how stress affects the health of the worker through changes in the central and peripheral nervous system. It will describe how the health of the worker impacts performance in the workplace. It will also describe techniques used in the workplace to both reduce and deal with psychological and physical problems and suggest a procedure for monitoring the well-being of employees and the organization. The second paper will present research that delves into the way employees manage the risk of work-related psychological injury from stressors. It describes the construction of a valid and reliable tool to measure the risks to health from the gap between job demands and resources to fulfill those demands. The third paper examines the role of depression as a psychosocial risk factor resulting from the difference between job demands and resources to fulfill those demands. It relates depression to organizational outcomes such as job satisfaction, productivity and intention to leave. This research is a part of the Australian Workplace Barometer (AWB) project. The fourth paper deals with the relationship between positive emotions (vigor, vitality) and the negative emotion (burnout) on the wellbeing of the worker and the success of the organization. It will describe the relationship between negative emotions and exhaustion,

cynicism and lack of feelings of accomplishment and the relationship between positive emotions and engagement and organizational success. It will present the thesis that positive emotions are incompatible with negative emotions and suggest procedures for intervention to reduce negative emotions. A Discussant will relate the four presentations and lead a discussion with the panel and the audience.

How organizations create stress and respond to the consequences of stress

REICHMAN, W. (Baruch College and the Graduate Center of the City University of New York)

A major juncture of health of the employee and health of the organization centers around job stress. Job Stress has been defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the needs, capabilities, or resources of the worker. We are living at a time when the world of work is changing rapidly and the requirements are becoming less synchronized for the worker than ever before. The major world wide economic upheaval of the last year is only the last of a series of changes that have affected employees. The loss and threat of loss of livelihood and the perception of losses to fellow employees, friends and family has induced major stress. Aside from these, globalization, outsourcing, new technologies, legal and regulatory change and increased competition have all become major stress inducers. The stress has ramifications on the health of the employee through its affects on the nervous system. The resulting physical disabilities and behavioral dysfunction then affects absence, turnover, health insurance rates, restriction of productivity, aggressive behavior, sabotage and an absence of engagement in the organization. Stress results in an unhealthy employee and eventually in an unhealthy organization. The unhealthy employees also affect the wellbeing of their family and therefore have ramifications in organizations beyond the one they work in. Management is beginning to recognize the relationship between stress and their organization's success and is beginning to take steps to reduce stress and to alleviate the conditions that cause stress. In an attempt to

relieve stress they are looking at such factors as safety conditions, job design, supervisory practices, management control, diversity and the general culture of the organization and the leadership that drives it. In addition, progressive organizations are instituting programs to deal with employee problems. Among these programs are Employee Assistance Programs, health, exercise and stress management programs, networking and mentoring programs and diversity programs. Their affect on the well being of the employee and the organization will be described. A procedure for monitoring both the health of the employee and the health of the organization will be described.

Keywords: job stress, health, stress management, employee assistance programs

Development of a psychological risk assessment tool to aid compliance with health and safety legislation: The People at Work Project

WAY, K. (Workplace Health and Safety Queensland, Department of Justice and the Attorney General, Queensland)

The People at Work Project is a collaborative research initiative between the government health and safety regulator, the University of Queensland, and the University of South Australia. The project was initiated in recognition of the need for increasing employer capacities to manage the risk of work-related psychological injury, particularly in relation to obligations outlined in health and safety legislation around the country. The project has a number of objectives including the development of a reliable and valid tool to assess the risk of work-related injury from exposure to psychosocial stressors. Drawing on existing models of occupational stress, the project researchers are developing a risk assessment tool which measures a range of job demands and job resources that are applicable to diverse working environments. To date, the risk assessment tool has been utilized by a sample of 40 organizations and approximately 6000 workers in a cross section of industries and occupations. Once validated, and the normative database is established, the risk assessment tool will become freely available,

providing an avenue for industry and occupational-level benchmarking. In addition to the development of a psychometrically sound risk assessment tool, the project also provides a structure for participating organizations to implement a risk management process for occupational stressors. Both the organizational processes used in conducting risk management for occupational stressors, and any interventions conducted by organizations in an attempt to reduce the risks associated with these stressors, will be evaluated.

Keywords: *psychological injury, risk assessment, job demands, job resources, risk management*

Depressed or engaged: Psychosocial risk factors, psychosocial safety climate, depression and engagement through the lens of the job demands-resources model

HALL, G. (University of South Australia)

In February 2009 the Australian Workplace Barometer (AWB) project was launched with data collection for the first wave of the AWB survey. The aim of the AWB project is to monitor the prevalence of psychosocial risk factors and counteractive factors with regard to workers' health, engagement and work productivity outcomes, and to identify 'at risk' groups. The AWB project is also a longitudinal general population-based test of the expanded Job Demands-Resource (JD-R) model of work stress and job engagement. The JD-R model emphasizes burnout as an intermediary mental health state between demands and negative health and organizational outcomes. In the present study we extended this research by examining the role of depression instead of burnout between psychosocial risk factors (i.e. job demands), counteractive factors (i.e. job resources), worker engagement, worker health and organizational outcomes (i.e. job satisfaction; intention to leave; and productivity). Mental health burden including depression represents the greatest population disability burden in Australia and there is good evidence that working conditions affect mental health (see Victorian Job Stress Survey). The present study also measures perceptions of psychosocial safety climate (PSC) in order to gauge up-stream (management) attitudes

regarding the importance of workplace psychological health. This paper reports on the first wave of data collected from the AWB survey. Statistical analysis using structural equation modelling was used to test sequential mediated pathways between the latent variables PSC, JD/R, Depression, Organizational Outcomes. Among $N = 2230$ workers it was found that, PSC was related to organisational outcomes via demands, and in turn to depression. Further in support of the JD-R model it was found that, PSC was related to organisational outcomes, via job resources, and work engagement. This paper contributes towards evidence based solutions to alleviate the effects of psychosocial risk that can contribute to worker depression with a further view to promote better PSC in organisations that reduce the effects of psychosocial hazards.

Keywords: *psychosocial risk factors, job demands-resources model, work stress, job engagement, psychosocial safety climate*

Positive emotions, health and burnout

GREENGLASS, E. R. (York University, Toronto)

Recently research has focused attention on the study of positive emotions and behavior and their implications for psychological and organizational functioning and health. For example, Fredrickson developed the broaden-and-build theory of positive emotions to explain the adaptive role of positive emotions. In discussing the broadening hypothesis, she argues that psychological and physical well-being may be increased by cultivating experiences of positive emotions to counteract negative emotions. Within the organizational sphere, research has focused mainly on negative constructs such as job burnout and its deleterious effects on health. Burnout is associated with negative emotions and behavior in which the worker may experience exhaustion, cynicism and a decrease in feelings of accomplishment on the job. Another concept that is increasingly being studied both within the organizational and clinical spheres, is that of engagement or vigor which may be seen as reflecting a positive motivational/emotional approach to one's endeavors. Moreover, subjective feelings of

well-being are characterized by self-reported vitality, positive affect and approaching one's goals. Recent research suggests that work engagement and vigor promote increased psychological well-being. The relationship between burnout and engagement is explored here in light of recent research showing that positive affect can occur during periods of chronic stress and that it may be associated with improved health related outcomes. The conceptual approach put forth in the present paper is based on the hypothesis that positive emotions are incompatible with negative ones. Theoretical and empirical implications of this approach are explored in this paper. Suggestions for interventions within the organizational sphere are explored as well.

Keywords: positive emotion, organisational functioning, job burnout, well-being, engagement

Environmental problems and risk perception

Chair(s): DE GROOT, J. (Bournemouth University)

There is a growing awareness that human behavior contributes to environmental problems such as water pollution, decline of biodiversity, and desertification (Intergovernmental Panel on Climate Change [IPCC], 2007). It is increasingly recognized that pro-environmental actions are essential for decreasing these problems and to promote sustainable development. This symposium focuses on these environmental problems and how to decrease these environmental problems from a risk perspective. We will show various psychological factors that contribute to (reducing) risky behaviors (Paper 1, 2, 3 and 4). We also discuss how environmental psychology can benefit from other disciplines to reduce environmental problems (Paper 5). Throughout this symposium, we will integrate our findings with existing research on risk perception and we will discuss the theoretical and practical implications of current psychological research. The learning objectives of this symposium are: (1) an understanding of current empirical research in the field of risk perception; (2) an increased critical awareness of theoretical models used to link environmental problems to risk perception; (3) an understanding of psychology's role in explaining and predicting risk perceptions and risk behaviors.

Morality and nuclear energy: Perceptions of risks and benefits, personal norms and willingness to take action towards nuclear energy

DE GROOT, J. (Bournemouth University), STEG, L. (University of Groningen)

In this study, we aim to examine whether the Norm Activation Model (Schwartz, 1977) is a relevant framework for explaining willingness to take action in favor of or against an increase in supply and use of nuclear energy in the Netherlands. In a questionnaire study among a

representative Dutch sample ($N = 123$), we measured perceptions of risks and benefits, personal norms and willingness to take action in favor of or against nuclear energy. We examined the relationships between these constructs by means of regression analyses. The Goodman version of the Sobel test was used to test the significance of the mediation effects. We also checked if the proposed model better explains willingness of opponents to take action against nuclear energy than willingness to take action in favour of nuclear energy of supporters by computing confidence intervals around the difference in R^2 . The results confirm that beliefs on risks and benefits of nuclear energy together with personal norms (PN) towards nuclear energy are powerful in explaining willingness to take action in favor of or against nuclear energy in the Netherlands. As expected, perceptions of risks and benefits were directly related to PN towards taking action in favor of or against nuclear energy, PN were strong predictors to explain willingness to take action, and, most importantly, PN mediated the relationships between perceptions of risk and benefits and willingness to take action. Beliefs on risks and benefits together with PN explained significantly more variance in willingness to take action of opponents than of supporters. Also, beliefs about the risks and benefits of nuclear energy were less powerful to explain PN for supporters compared to opponents. Our results support the norm activation model. The findings also suggest that opponents are focused more on collective risks than on personal benefits and therefore intend to act more out of normative considerations. Therefore, although a moral framework, such as the norm activation model, is useful to explain willingness to take action in favor of or against nuclear energy, it is more useful when explaining the latter.

Keywords: *norm activation model, nuclear energy, personal norms, risk, Netherlands*

The impact of Swiss anglers' mental models on perceived risks and benefits of fish stocking behavior

VON LINDERN, E. (Swiss Federal Institute of Aquatic Science and Technology), HAERTEL-BORER, S. (Swiss Federal Institute of Aquatic

Science and Technology), MOSLER, H. J. (Swiss Federal Institute of Aquatic Science and Technology)

Fish stocking has been identified as a possible threat to whole aquatic ecosystems. Nevertheless, studies among Swiss recreational fishermen showed that they appreciate fish stocking as a management tool, attribute much influence to it and a majority of them wants to keep stocking at the current level or even plans to increase it. By collecting the mental models of Swiss recreational fishermen we want to get a deeper understanding of the anglers' attitude towards stocking. Additionally, we want to know whether – and to what degree – they see risks for the ecosystem from applying fish stocking as a fisheries management tool. We conducted a preliminary qualitative study and applied the structure-laying-technique in combination with an open-ended theme-focused interview to collect mental models of 12 recreational fishermen. As a follow-up study we mailed a survey to 3,315 Swiss anglers and asked for relations between components that emerged from analyzing the interviews, the attitude towards fish stocking and for perceived risks and benefits of fish stocking from the anglers' point of view. In the interviews we found two different types of mental models for the anglers regarding fish stocking: The first mental model states that fish stocking should be done independently from the efficiency of natural reproduction (additive type) while the other mental model claims that fish stocking should only be done if there is a lack of natural reproduction (compensatory type). For the nationwide survey study we received a total of 418 responses and found that the anglers who could be allocated to the compensatory type have a more differentiated attitude towards stocking, attribute less influence to it and see more risks and fewer benefits regarding fish stocking than the anglers who could be allocated to the additive type. These differences were all significant ($p < 0.05$). Analyzing mental models provides a more comprehensive understanding of stakeholders' management behavior. The perception of risk and benefit depends on the underlying mental model. For inadequate risk/benefit perception, mental model analysis offers a good starting point for intervention planning.

Keywords: *fish stocking, mental models, recreational fishermen, ecosystem, perceptions*

The consumption of fluoride free drinking water using filters in rural Ethiopia

GONZALEZ, A. (Swiss Federal Institute of Aquatic Science and Technology), MOSLER, H. J. (Swiss Federal Institute of Aquatic Science and Technology)

In the Ethiopian Rift Valley, which inhabits about 10 million people, the ground water contains an excess of fluoride concentration. The consumption of this water leads to a high risk of dental and skeletal fluorosis. Unfortunately, it has been found that the medical treatment of dental and skeletal fluorosis is difficult and mostly ineffective. The main purpose of this study is to assess the personal, social, and situational factors that influence acceptance and continuous use of fluoride removal systems on household level, and to test behavioral measures that are useful to increase the habitual use of fluoride removal systems. For preliminary data, 120 households from two rural villages in the Ethiopian Rift Valley, who were part of pilot project, were interviewed. These households own a fluoride removal filter for over a year. The survey was conducted by local interviewers with a structured face-to-face interview. The questionnaire contained items on current water consumption, awareness, perceived vulnerability, severity of health threat, knowledge, convictions towards filter use, filtered water and raw water, social influences, willingness to pay and habit strength. Multiple linear regressions were used to analyze the data. The data analysis showed that the households only occasionally are using the filters to prepare their drinking water. More over, the households still use the filtered water for cooking purposes. The data confirmed that the users have not yet created a habit concerning the use of the filter. Regression analysis revealed that forgetting and commitment are important factors to predict habitual use of the filter and the habit to consume fluoride free water. Nevertheless, situational factors (e.g. concerning maintenance problems) and above all convictions about taste and effectiveness of the filter media found also to be important for

predicting the filter use. The identification and analysis of the found predictive factors enables the development of psychological strategies with which the preventive innovations are accepted and used regularly in matter of habit by the population in rural Ethiopia. Continuous and habitual use is necessary for preventing fluorosis and therefore psychological interventions are an important approach to reach the study's goal.

Keywords: *ground water, fluoride, fluorosis, fluoride removal systems, Ethiopian Rift Valley*

Risky consumption of drinking water: Predicting the use of arsenic-safe drinking water options in Bangladesh

INAUEN, J. (Swiss Federal Institute of Aquatic Science and Technology), MOSLER, H. J. (Swiss Federal Institute of Aquatic Science and Technology)

Twenty million people in Bangladesh are at risk of consuming naturally occurring, arsenic-contaminated groundwater. Although arsenic-safe water options (e.g. dug wells) have been installed to mitigate this environmental health hazard, many people keep on using contaminated water sources, i.e. shallow tubewells. This study is aimed at identifying factors derived from health-behavior theories, such as the Health Action Process Approach (HAPA), and social influence theories, such as the Theory of Planned Behavior (TPB) that predict people's consumption of arsenic-free drinking water. Eight hundred households in rural Bangladesh were surveyed by structured face-to-face interviews. Sampling areas in different geographical regions of Bangladesh were defined according to the availability of arsenic-contaminated water and the availability of one or more of eight arsenic-free water sources. Within each study area, households were chosen by random route sampling. The questionnaire contained items on water consumption, risk perception, knowledge, attitudes towards different water sources, social influences, self-efficacy, and willingness to pay. The data was analyzed by multiple linear regressions. Our analysis confirmed that many households in rural Bangladesh still consume arsenic-contaminated water, despite the availability of

alternative water sources and increasing risk awareness. Multiple linear regressions revealed the importance of social influences on the consumption of arsenic-free drinking water. However, also convictions (i.e. about the taste, smell, temperature of the water), self-efficacy and perceived barriers were found to be predictive of people's use of uncontaminated water sources. The present study successfully identified important factors predicting the consumption of arsenic-free water in rural Bangladesh. From the results, psychological interventions can be derived and field-experimentally tested regarding their efficacy of influencing the behavior determinants revealed in this study and increasing people's use of arsenic-safe drinking water sources. Thereby, psychology can make an important contribution to mitigating geogenic contamination in Bangladesh and other places in the world where low water quality poses a public health threat.

Keywords: *contaminated groundwater, health action process approach, theory of planned behavior, risk perception, Bangladesh*

Sustainable consumption in environmental dilemmas? The necessity of interdisciplinary approaches

BECKENKAMP, M. (Max Planck Institute for Research on Collective Goods)

Since the late 1980s the ecologically based concept of physical sustainability has been put in the wider context of social and economic development. Consequentially, a number of interdisciplinary approaches between natural and social scientists began (Ohl et al., in press). With regard to sustaining biodiversity it is seldom in the self-interest of consumers to behave cooperatively (i.e. conservation-friendly manner, (Montada & Kals, 2000)) Therefore, the ecological goals (like biodiversity goals both in natural and cultural biodiversity) pursued by striving for a sustainable consumption are threatened by a "drama of the commons" (Ostrom et al., 2002). In the past this structural impact was ignored in many approaches, because besides informing consumers about the actual state of things both with respect to the relationship between consumption and sustainability, it is

also important that consumers are informed about the social dilemma beyond that. It may well be that this information alone is not sufficient to change considerably consumers' behavior to more sustainable consumption, but it probably will raise the acceptance of institutions that help to find fair prices, i.e. prices where the market failures are alleviated or even annihilated. However, the implementation of such institutions – accompanied with controls and sanctions – and the efficiency of institutions is a research question of institutional design. Until now, environmental psychology barely tied in with that research, although it has accumulated piles of research on decisions in social dilemmas. The method of this study involved experiments on social dilemmas. The results show that information policy about social dilemmas matters. Awareness about the dilemma raises the willingness raises the acceptance of institutions that help to solve the dilemma. Psychological knowledge about social dilemmas is both relevant and would be fruitful in raising the efficiency in the implementation and the governance of institutions.

Keywords: *biodiversity, sustainable consumption, sustainability, social dilemmas, consumption*

Ethical and organisational issues in practice management

Chair(s): STOKES, D. (The Australian Psychological Society)

The changing circumstances in both the public and private sectors of professional activity have brought a variety of management and employment relationships. Not only does this impact on the complexity of organisational and contractual arrangements, but it has led to various forms of relationships around file management, file ownership and access to records. These new work arrangements raise many issues which are also produced by the high-level of ethical standards required of psychological practitioners with regard to client information. In addition, the formation of new work arrangements raises a range of legal and contractual issues.

Models of practice and contractual relationships

STOKES, D. (The Australian Psychological Society)

Many of the issues about which practitioners seek advice and support from their professional association are related to the nature and type of relationships established in their practice. Before you can provide principles of practice and specific advice about procedures, it is necessary to clearly identify the model of practice in operation – regardless of whether it is a professional practice in the public or private setting. To this end, this presentation will provide a typology of professional practice models and demonstrate by reference to specific models the impact that a variation in model can have on issues such as file access. Implications for practitioners when considering setting up or varying their practice structure will be identified.

Keywords: *typology, professional practice*

File management and record keeping in the new health scene

MATHEWS, R. (The Australian Psychological Society)

Issues of client file management, ownership and access to client records are complex, demanding and often raise concerns for many psychologists in private and public settings. Establishing a set of agreed principles and guidelines to protect clients and practitioners is necessary. The Australian Psychological Society, as a professional society concerned with managing practice standards, is aware of the concerns that these issues cause practitioners. Drawing on the varying models of professional practice, issues of file management related to these models are identified and possible solutions discussed in the context of a range of practice settings. Particular note is made of the implications for file management in the public sector and the possible impact of the emergence of the electronic health record.

Keywords: *file management, record keeping, electronic health record*

Legal responsibilities in file management

JIFKINS, J. (The Australian Psychological Society)

Legal requirements of practitioners working within various contractual and employment arrangements regarding client records are often poorly understood. The impact of legislative and legal processes on matters such as file storage, ownership and access will be outlined in this presentation along with possible consequences for violation of these requirements. Practitioners will be provided with a range of legislative and legal concepts that will guide and direct their professional activities.

Keywords: *legal responsibilities, file management*

Ethical challenges for psychologists who work with detainees

Chair(s): ALLAN, A. (Edith Cowan University)

Discussant(s): KOOCHER, G. P. (Simmons College)

This symposium explores the unique ethical challenges that confront psychologist who work with people in various forms of detention which place restrictions on their freedom. Individual presentations address ethical challenges facing psychologists and related challenges to detainees' human and civil rights in custodial, immigration and security detention settings. The focus of presentations will be on how psychologist can avoid the mistakes of the past.

Australia's off-shore mandatory immigration detention of asylum seekers: Ethical challenges for psychology

DAVIDSON, G. R. (University of the Sunshine Coast)

The paper examines Australia's current policies and practices relating to the off-shore processing of asylum seekers, as they may influence the ethical professional practice of psychology. It briefly analyses Australian political discourse on the themes of border security, people smuggling and queue jumping before discussing the implications of off-shore processing for asylum seekers' human and legal rights and for mandatory detention of minors and their families. It then examines the ethical challenges for psychologists working in immigration detention that arise in circumstances involving multiple clients, role overlap between assessment, therapeutic treatment and crisis management or negotiation, limits on clients' autonomy to protest against perceived human rights violations, and conflicts between ethical professional standards, international human rights conventions and local law. Application of the principles of beneficence and non-

maleficence is informed by existing research findings about the effects of on-shore mandatory detention on the adult and minor detainees' mental health and psychological wellbeing.

Keywords: *asylum seekers, ethical practice, immigration detention, ethical issues*

Forensic psychologists in prisons: A normative framework to ensure ethical offender rehabilitation

BIRGIN, A. (Deakin University)

The roles of forensic psychologists in coercive environments, such as corrections, include that of treatment provider (for the offender) and that of organizational consultant (for the community). This dual role raises ethical issues between offender rights and community rights; an imbalance results in the violation of human rights. A timely reminder of a slippery ethical slope that can arise was the failure of psychologists to manage this balance in the interrogation and torture of detainees under the Bush administration. To establish a "bright-line position" regarding ethical practice, forensic psychologists need to be cognizant of international human rights law (Birgden & Perlin, 2009). In this endeavor, international covenants and a universal psychological ethical code ought to guide practice, although conflicts between the law and ethics codes will arise. A solution to this problem is to devise a normative framework that is based on human rights values. Human rights are based on legal, social, and moral rules. Human rights literature generally considers legal and social rights but do not provide principles to guide forensic psychologists in addressing moral rights. Ward and Birgden (2007) have proposed a human rights model for offender rehabilitation. Meeting offender rights includes ensuring core values of well-being and freedom. Well-being is the right to physical, social and psychological health. Freedom (albeit restricted) is the right to be treated with respect and dignity and to be afforded the opportunity and capacity to make autonomous decisions about how to live a life. A normative framework based on human rights will be proposed. The aim is to guide psychologists in the assessment of risk,

the treatment of need, and the management of treatment readiness, particularly of high risk, serious offenders.

Keywords: *forensic psychology, offender rights, community rights, human rights, ethical offender rehabilitation*

Ethical challenges facing psychologists working in national security detention settings

BEHNKE, S. H. (American Psychological Association)

This presentation will focus on the unique ethical challenges of psychologists working in national security detention settings. Drawing upon the experiences of the American Psychological Association in addressing the ethical aspects of psychologists' involvement in interrogations, the presenter will describe the evolving position of the American Psychological Association related to detention facilities between 2005 and 2010. The presentation will discuss how the ethical issues were framed by American Psychologists, and highlight the distinction between psychologist behaviors and detention settings as addressed in American Psychological Association resolutions. The presenter will identify ethical challenges for psychologists unique to national security detention facilities, and will reflect on lessons for psychologists who will be working in national security detention facilities in the future.

Keywords: *ethical issues, detention settings, American Psychological Association*

Ethical issues in professional psychological practice: Future challenges

Chair(s): GORDON, A. (Private Practice)

Discussant(s): SYMONS, M (The Australian Psychological Society)

This symposium will examine emerging ethical issues in the practice of psychology in three areas: Confidentiality, cyber ethics and the maintenance of professional boundaries. World wide, psychology is practiced in an increasingly complex and enmeshed web of professional and organisational roles. Globally psychologists are also working in changing legal contexts. Such structural, technological and legal changes have a considerable impact on the ethical practice of psychology. These three papers will address changes in the conceptualisation of confidentiality, the new challenges introduced by the development of delivery of psychological services online, and the maintenance of professional boundaries in the environment of contemporary practice. How relevant codes of ethics address these issues will be examined. The first paper will address shifting perspectives regarding confidentiality, privacy and privilege. The second paper will consider how existing ethical frameworks and codes of practice for psychology can be applied to emerging modes of electronic service delivery. The third paper will present an analysis of the type of boundary violations that have led to complaints being upheld against psychologists in an Australian context. It will argue that psychologists need to be aware of changing conceptualisations of boundary issues.

Confidentiality, privacy and privilege in the relationship between client and psychologist

MCMAHON, M. (La Trobe University)

Information is routinely imparted by clients to psychologists with the expectation that it will

not be disseminated more widely than authorised by the client. Indeed, confidentiality and privacy are frequently held to be defining features in the relationship between clients and psychologists. The special sensitivity attached to health information is frequently recognised in legislation. However, in Australia privilege is not often accorded to the clients of psychologists. Developments in the delivery of psychological services and changes in the law have impacted considerably upon the disclosure of health-related information and issues of privacy, confidentiality and privilege in contemporary Australia. The growth of multidisciplinary treatment teams and the proliferation of electronic means of recording data have substantial implications for the management of client information and the introduction of privacy legislation has contributed to an ever-growing body of law that affects both information disclosure and protection. Psychologists are often confronted by multiple – sometimes competing – demands. This presentation will try to untangle some of this complexity by outlining key professional and legal issues relating to confidentiality, privacy and privilege in Australia.

Keywords: *information, privacy legislation, Australia, psychological services, confidentiality*

Cyberethics for cyberpsychology: Emerging issues from anxietyonline.org.au.

AUSTIN, D. (National eTherapy Centre, Swinburne University of Technology)

Many of the existing ethical frameworks and codes for the practice of psychology may be usefully employed in the provision of emerging modes of service delivery alternately known as "eTherapy" or "cyberpsychology". Nevertheless, emerging modes of practice and communication technologies continue to force practitioners, regulators and policy-makers to revisit ethical codes of conduct. Anxietyonline.org.au is an internet-based assessment and therapy provider funded by the federal Department of Health and Ageing. Experiences from this service highlight many of the new ethical challenges raised by cyberpsychology and hence the urgent need

for progressive and dynamic codes of ethical conduct relevant to this rapidly expanding modality.

Keywords: *ethical codes of conduct, communication technologies, cyberpsychology*

And authors boundaries and multiple relationships in contemporary psychological practice: Risk management

KNOWLES, A. (Swinburne University of Technology)

Psychology is practiced in an increasingly complex and enmeshed web of professional and organisational roles. This paper examines ethical principles supporting the maintenance of professional boundaries and how relevant codes of ethics address these issues. While it has long been argued that psychological practice is threatened by boundary crossings and violations within the professional relationship, this paper argues that the modern environment in which psychology is practiced increases the likelihood of dual role relationships occurring. Australian case examples of specific boundary violations are analysed and the justifications given by practitioners for their behaviour are considered. The paper will conclude with suggestions for practice regarding how psychologists might avoid harmful boundary violations.

Keywords: *professional boundaries, ethics, psychologists, boundary violations*

Evaluation of a therapeutic program for child protection clients: The Take Two program

Chair(s): PAWSEY, R. (Director, Take Two)

Discussant(s): RADOVINI, A. (Director, Mindful Centre For Training and Research in Developmental Health / Deputy Chief Psychiatrist, Child and Youth)

This symposium provides an opportunity to reflect on the clinical, research and training aspects of a therapeutic program for child protection clients. Take Two provides therapy directly with children who have suffered maltreatment (0-17 years) and their significant relationships, and works with the broader system. Take Two is run by a consortium of a child welfare agency (Berry Street), a child and adolescent mental health service (Austin CAMHS), a university (La Trobe University), a teaching organisation for mental health services (Mindful) and an Aboriginal community controlled organisation (Victorian Aboriginal Child Care Agency). It is funded by the state government to (i) provide a high quality clinical service to child protection clients and (ii) to contribute to service system improvement. As such Take Two provides a range of therapeutic services, such as through general clinical teams, an Aboriginal team, and a therapeutic service to Secure Welfare. It is also funded to undertake research and to provide training to the broader field. As part of this work, Take Two has formed collaborations with international partners such as Professor Bruce Perry (Child Trauma Academy, USA). This symposium will briefly describe Take Two and its conceptual framework, which is based on a developmental and ecological perspective and is informed largely by attachment and trauma theories. It will examine the application of an outcomes framework and report the findings on two outcome measures (SDQ and TSCC). There will be a description of the work involved in Secure Welfare and with Aboriginal clients. There will also be a presentation on the training strategy developed to disseminate understanding of trauma and attachment as it applies to foster

care, residential care, schools, child protection, youth justice and other settings. The key learning objectives include: Exploration of a clinical service and its outcomes for children using attachment and trauma theory; Consideration of how attachment and trauma-informed practice is used with different populations, such as child protection client group, Aboriginal children and children in care; and examination of a training strategy as part of a clinical intervention towards positive outcomes for children and the broader service system.

Take Two research: Using outcome measures in a clinical program

FREDERICO, M. (Head, School of Social Work and Social Policy, La Trobe University)

To present findings on the Take Two program's use of clinical outcome measures to gain insight into the children's presentation and examine whether Take Two contributes to more positive outcomes for children. Take Two has developed an outcomes framework and the suite of clinical outcome measures used includes the Strengths and Difficulties Questionnaire (SDQ, Goodman, 1999), the Trauma Symptom Checklist for Children (TSCC, Briere, 1996) and the Trauma Symptom Checklist for Young Children (TSCYC, Briere, 2005). The SDQ is a standardised measure of psychological adjustment and behaviour for children. There are three versions: a self-report; a parent/carer; and a teacher version. The TSCC and TSCYC are measures designed to assess the impact of exposure to traumatic events in children. The TSCC and TSCYC each have six clinical scales reflecting different aspects of traumatisation. The TSCC is a self-report measure and the TSCYC is completed by parents and carers. These outcome measures are administered by clinicians during the assessment period, at each six monthly review and at closure. The children for whom the measures were completed at baseline demonstrated major difficulties. The SDQ revealed some significant differences in terms of gender and age and to a lesser extent with Aboriginal identity. There was significant change for these children in a range of areas. Young people themselves identified positive changes in a number of areas. The group less

likely to see significant changes was teachers. The baseline data of the TSCC and TSCYC demonstrates that a number of children score in the clinical range of trauma symptoms at the time of assessment. When looking at change over time the findings indicate that Take Two is making a difference in a range of areas related to post-traumatic stress symptomatology, namely anxiety, depression, anger and post-traumatic stress. Use of the SDQ, TSCC and the TSCYC as clinical outcome measures provide insight into the children's psychological adjustment, posttraumatic symptoms and related psychological problems. The evidence so far demonstrates that children involved with Take Two are making a positive difference in their lives.

Keywords: *Take Two program, children, psychological adjustment, Aboriginal identity, trauma*

Characteristics of a high-risk adolescent population: Take Two in secure welfare

MCKENZIE, R. (Manager, Therapeutic Care, Take Two)

To present data on a high risk population of adolescents in child protection who are placed in Secure Welfare and to explore the therapeutic implications. Since the establishment of Take Two in 2004, it has provided a therapeutic specialist role embedded within a Secure Welfare setting. Secure Welfare is a Victorian government secure facility consisting of one 10 bed unit for young men and another 10 bed unit for young women (aged between 9 and 18 years). Young people are admitted to Secure Welfare if they are on a child protection court order and are considered to place themselves at high risk of harm, including self-harming, absconding, substance abuse, commercial sexual exploitation and other high risk activities. Admissions are brief, ranging from 24 hours to 21 days. Following a description of the work by Take Two in Secure Welfare, there is analysis of referral data regarding the maltreatment experiences of the young people according to child protection and their emotional, physical, developmental and social presentations. This is collected through a purposefully designed referral tool, known as the Harm

Consequences Assessment as well as other referral documents. Some comparisons are made between the Take Two population in Secure Welfare and the remaining Take Two client group of the same age range. Of the 1063 referrals to the Take Two program since 2004, 39% were for high risk young people in Secure Welfare. These young people shared many characteristics with the rest of the Take Two population but also had a range of significant differences. Differences included their history of child protection involvement, their experiences of abuse and neglect, and their emotional and behavioural difficulties. Although some of the differences in history and current presentation were as expected other differences were surprising and require further discussion and examination. This data highlights the importance of not making assumptions about high risk young people or perceiving them as a homogenous group. Implications for assessment and recommendations to the broader service system are also discussed.

Keywords: *high-risk, adolescents, Take Two program, secure welfare, child protection*

The Take Two approach to culturally-appropriate practice with Aboriginal clients

COADE, S. (Manager, Aboriginal Service Development, Berry Street)

Take Two has a strong commitment to practice culturally-appropriate therapeutic interventions. To achieve positive outcomes for Aboriginal children, a community and family orientation along with a cultural perspective is needed. To this end, Take Two has developed a state wide Aboriginal Team that performs clinical, program development, and training functions. This paper presents two tools developed by the Aboriginal team to promote culturally appropriate practice: the Aboriginal and Torres Strait Islander (ATSI) assessment tool and the Yarning Up on Trauma (YUT) training. The ATSI assessment tool is a semi structured questionnaire designed to assist non-Aboriginal clinicians in their assessment of Aboriginal children's connection to their culture, history, identity, and key people in the community, in order to

strengthen these connections. YUT is a unique amalgamation of training and community therapeutic intervention for those working with the Aboriginal population. It was designed in conjunction with VACCA to assist workers in ATSI organisations to understand historical and present day trauma, and to assist those workers to recognise and deal with their own trauma as well as trauma of the children and families they work with. Feedback is collected from participants on the effectiveness of the intervention. Data from 41 completed ATSI tools showed that a substantial number of Aboriginal clients are disconnected from their land and culture, and indicate directions for therapeutic intervention to strengthen their connection. In addition, the nature of placement (e.g., kinship or foster care) was not associated with a child's cultural connection. Data from 170 participants over 13 YUT programs showed that YUT was useful to most participants, and indicate the most helpful elements of the program. The findings indicate the potential of these tools to promote culturally-sensitive practice with the Aboriginal population. The ATSI tool provides useful information to assist non-Aboriginal clinicians in assessment and intervention planning for the cultural needs of Aboriginal clients. The YUT program provides direction for the content, format, and staffing of culturally appropriate training programs, as well as the need to acknowledge and provide for the likely therapeutic needs of the participants.

Keywords: Aboriginal, Take Two program, training, community, trauma

The role of training in building capacity of the broader service system.

TANTI, C. (Senior Practice Development Officer, Take Two)

One of the objectives of the Take Two program is to build capacity within the community services, health and education sectors to provide a therapeutic response to children and young people who have experienced abuse and/or neglect. Take Two provides training to workers in these sectors in order to increase their understanding of the impact of abuse and neglect on children's development, and to increase their ability to

respond therapeutically to children's behaviours associated with trauma and attachment disruption. This paper presents two such training packages: "With Care" for workers in the residential care sector, and "Calmer Classrooms" for staff in the education sector. The "With Care" 2-day package was developed in partnership with a major residential care provider (Westcare), for residential care staff across Victoria. The "Calmer Classrooms" training was designed to support the booklet commissioned by the Office of the Child Safety Commissioner, and is developed to suit the individual school (ranging from a one-hour to a full-day program). The training packages are tailored to the participants' specific work setting in terms of content, format, and presenters. Data was collected through participants' evaluations of the training. Data from 424 participants in the "With Care" training showed that the majority of participants reported the training greatly increased their understanding/knowledge (58%-70%) and greatly increased their confidence/ability to apply this understanding to various aspects of their work (66%-85%). Data from 196 participants in "Calmer Classrooms" training were even stronger; and showed that 95.92% of participants strongly agreed or agreed that the training increased their understanding/knowledge, and 86.22% strongly agreed or agreed the training increased their confidence/ability to apply these understandings to their work practice. The findings suggest that these training packages are highly effective in increasing workers' understanding of the impact of abuse and neglect on children and confidence in their ability to respond therapeutically to trauma and attachment related behaviours in their clients. As such the findings indicate that tailored training packages for workers in related sectors can support clinical interventions by building capacity to provide a therapeutic response during the 'other 23 hours'.

Keywords: Take Two program, community services, children, abuse, neglect

Executive function in children and young adults: Experimental findings and practical implications

Chair(s): WHITE, M. (Centre for Accident Research and Road Safety and Institute of Health and Biomedical Innovation QUT)

Discussant(s): SHARMAN, R. (Institute of Health and Biomedical Innovation and School of Psychology and Counselling QUT)

The role of executive function in development is critical but poorly understood. Young people with decreased cognitive abilities, particularly executive function deficits, are at an educational and vocational disadvantage relative to their peers. Executive function is critical for the performance of many life skills. The development of executive function is delayed relative to other cognitive abilities, which may help to explain many of the behavioural idiosyncrasies of youth. However, in some groups, executive function follows a different developmental trajectory, one that might predispose some young people to developmental delays that may negatively impact social, educational and vocational outcomes and opportunities. This symposium will provide a snapshot of research investigating developmental cognitive dysfunction in children and young adults with a specific focus on executive function. The first study presents the results of an investigation into executive function deficits in children with phenylketonuria (PKU). The second study reports on the interactive influences of psychosocial stress and two genetic polymorphisms associated with reduced dopamine receptor density in the brain on behavioural measures of impulsivity in young adults. The third study presents data examining the impact of omega-3 polyunsaturated fatty acid and executive function deficiencies in children with ADHD. The final study examines the effect of anxiety on attentional control in cognitive and motor performance and proposes

a framework for future investigations of anxiety on task performance. Each of these studies presents findings that will be informative for psychologists with an interest in factors thought to mediate executive development throughout childhood and young adulthood.

Executive function deficits in children with phenylketonuria, towards further understanding a dopaminergic basis

SHARMAN, R. (Institute of Health and Biomedical Innovation and School of Psychology and Counselling QUT), YOUNG, R. (Institute of Health and Biomedical Innovation)

Phenylketonuria (PKU) is a genetic disorder that causes altered biochemistry, resulting in downstream neurotransmitter dysregulation. Left untreated, this will result in severe intellectual disability and substantial white matter loss in the developing brain. Treatment via medically prescribed diet has seen this population develop normally in terms of standard IQ scores. However, children with early and continuously treated PKU remain at elevated risk of developing executive function (EF) impairments. Over 10 years ago, Diamond first proposed these residual impairments may result from a low dopamine environment in the developing brain, caused by a high phenylalanine to tyrosine (phe:tyr) ratio. Few experimental studies have followed up this hypothesis, as the research agenda remains focussed on phenylalanine-only measures. Further, the routine screening of tyrosine levels in these patients is highly variable. This study aimed to analyse children's EF development longitudinally against their lifetime biochemistry to ascertain which biochemical markers were most strongly associated with poor EF across two critical time points in development (early childhood and early adolescence). 17 children with PKU were assessed in 2002 on a battery of neuropsychological tests. In 2009 these children were reassessed on a select number of tests that have since been shown to be particularly sensitive in detecting EF deficits in this population. In the 2009 study, parents also filled out two questionnaires assessing EF and mood (the Behaviour Rating Inventory of Executive Function and Children's Depression

Inventory); questionnaire data related to both children with PKU and their siblings in 2009 to allow for a between groups comparison. Both phenylalanine and phe:tyr ratio were shown to be associated with global impairments. A high phe:tyr ratio (a precursor to dopamine impairment) was more strongly associated with the residual EF deficits that remain problematic for this population. Current treatment for PKU centres around phenylalanine control; there may be another mechanism via the phe:tyr ratio leading to dopamine deficiencies that better accounts for residual EF deficits in this population. Future treatment may need to incorporate phe:tyr control to protect the developing brain. This research furthers our understanding of the possible dopaminergic basis of EF development.

Keywords: Phenylketonuria, biochemistry, dopamine, intellectual disability, executive function

Differential contributions of two dopaminergic genetic markers and environmental stress on behavioural phenotypes of impulsivity in young adults

WHITE, M. (Centre for Accident Research and Road Safety and Institute of Health and Biomedical Innovation QUT), MORRIS, P. (Institute of Health and Biomedical Innovation QUT), LAWFORD, B. (Institute of Health and Biomedical Innovation QUT)

To examine a potential genetic contribution to impulsivity that operates through dopamine, consistent with key assumptions of leading personality theories of impulsivity. Specifically, to examine the contribution of two common genetic polymorphisms, the DRD2/ANKK1 TaqIA and DRD2 C957T, which have previously been associated with reduced D2 dopamine receptor density in key brain reward areas and several clinical disorders of impulsivity. DRD2/ANKK1 TaqIA and DRD2 C957T genotyping was conducted on 72 healthy young adults who were randomly allocated to either an acute psychosocial stress or relaxation induction condition. Participants completed a self-report measure of chronic stress, a pre- and post-induction card-sorting index of reinforcement sensitivity and post-

induction computerized response inhibition and delay discounting tasks. The TaqIA showed a direct association with response inhibition and with reinforcement sensitivity. Specifically, those with the A1 allele showed greater and faster disinhibition as well as slowed baseline reward-cued responding which improved over time, regardless of type of induction. In contrast, the C957T showed an interaction with acute stress on the reward-cued card-sorting and delay discounting tasks, whereby those with the CC genotype showed increased reinforcement sensitivity and faster delay discounting after acute stress induction, compared with those CC genotypes who were not stressed. Higher chronic stress exposure was associated with reduced baseline reinforcement sensitivity, and this reduction was of a similar magnitude to the TaqIA effect for this measure. These data provide indirect support for the involvement of dopaminergic systems in impulsivity in young adults through a genetic association. They highlight the multidimensionality of impulsivity and complexity of gene-stress interactions. The TaqIA appears to be associated with both a "rash impulsive" behavioural style and reinforcement-related learning deficits that are independent of stress. In contrast, C957T may be associated with reward related impulsivity in response to acute psychosocial stress.

Keywords: genetic contribution, dopamine, impulsivity, psychosocial stress, gene-stress interactions

An investigation of the effects of essential fatty acid deficiency on executive functions in children with Attention Deficit Hyperactivity Disorder (ADHD)

BOON, J. (Institute of Health and Biomedical Innovation and School of Psychology and Counselling QUT)

The aim of this study is to investigate those key executive functions felt to be the cornerstone of Attention Deficit Hyperactivity Disorder (ADHD) and co-morbid reading/writing disorders, namely, working memory, disinhibition and planning/organisation and their relationship to essential fatty acid deficiency in an ADHD population. 42 Male and 5 female participants between 6-13 years

agreed to participate in the study. Forty-two participants reported co-morbid literacy difficulties. Blood samples were collected from 92 % of participants for analysis of essential fatty acid status. Participants completed performance and ecologically based psychological assessment tools including select items from the Test of Everyday Attention in children (TEA-ch), a computerised Continuous Performance Task, Spelling and Word reading sub-tests of the Wechsler Individual Achievement Test – II and Vocabulary sub-test from the Wechsler Intelligence Scale for Children – IV. Parents rated their child's frequency of thirst, dry skin, and brittle nails on the Fatty Acid Deficiency Symptom Scale (FADS). Parents also completed the Connors Parent Rating Scale – Long Version (CPRS-L) and the Behaviour Rating Inventory of Executive Functions (BRIEF). Parents rated disinhibition on the BRIEF as the most problematic in this population. A correlation analysis showed a strong relationship between Parental reported symptoms of FADS with executive functions, in particular their ability to focus/attention and working memory skills. A weak relationship between blood biomarkers, organisation of school materials and focus/attention shifting was observed. A standard regression showed a significant relationship between spelling skills, vocabulary, ability to shift focus/attention and clinical indicators of fatty acid deficiency. Parental ratings of FADS, executive function checklists and young people's performance on neuropsychological measures of executive functions can assist in identifying those children with ADHD most at risk to determine the appropriate course of treatment and intervention.

Keywords: executive function, attention deficit hyperactivity disorder, working memory, disinhibition, fatty acid deficiency

Effects of anxiety on young adults' executive functioning: experimental results and practical implications in driving lapses

WONG, I. (Centre for Accident Research and Road Safety and Institute of Health and Biomedical Innovation QUT), MAHAR, D. (School of Psychology and Counselling QUT), TITCHENER, K.

(Centre for Accident Research and Road Safety QUT)

Attentional failure has been reported by accident statistics and experimental studies to be a significant contributor to traffic crashes. Emerging research has highlighted the important influence psychological factors such as anxiety have on cognitive and motor performance. Given the overrepresentation of young adults in crash statistics and that the effortful attentive processing required in driving of this cohort due to inexperience, the aim of this study is to investigate the effects of anxiety on young adults' executive functioning, and its potential implications for their driving performance, in particular driving lapses. 49 young adults aged between 17-25 years took part in the study. An additional 26 older adults aged between 26-47 years participated in the 1 hr experimental trial. All participants completed the Parametric Go/No-Go and n-back tasks, the State-Trait Anxiety Inventory and the Driver Behavior Questionnaire (DBQ). As anticipated, highly-anxious individuals maintain accuracy at the expense of response time for the inhibition, set-shifting as well as updating function of the Central Executive. Interestingly, the impairments in response times due to anxiety are especially pronounced amongst young adults. Further, compared to their older counterparts, young adults demonstrated significantly higher driving lapses scores on the DBQ. Finally, the deficit in response times on the Central Executive functions partially mediated the anxiety-driving lapses relationship reported in previous literature. Findings from the current study provide evidence to support the potential of Attentional Control deficits in accounting for the influence of anxiety on driving performance, especially among young adults. These findings have implications for future efforts to address the problem of traffic crashes due to attentional failure, especially amongst novice drivers, for whom driving remains an effortful task that requires deliberate attentive processing. Finally, the present study offers a novel perspective from cognitive psychology to the problem of the overrepresentation of young drivers in accident statistics.

Keywords: *attentional failure, anxiety, cognitive performance, executive function, driving lapses*

Exploring positive adaptation to diverse challenges and developmental periods

Chair(s): SERLACHIUS, A. (The University of Melbourne)

Discussant(s): FRYDENBERG, E. (Graduate School of Education, The University of Melbourne)

This symposium presents data from a range of studies regarding positive adaptation in diverse populations and across several developmental periods. The first paper presents findings from a qualitative study of adolescents with type 1 diabetes, exploring adolescents' views on an existing generic coping skills training program and how it can be adapted to meet their needs. The findings demonstrate the importance of providing skill-based psychosocial education in type 1 diabetes. The second paper investigates how to conceptualise the relationship of positive development to psychopathology using person-centred analyses in a sample of young adults. The data suggest that successful adaptation and psychopathology are not simply poles of a single continuum, and discusses implications for theory and intervention development. The third paper presents a community-based qualitative study which identified coping strategies of preschoolers, and their ability to identify a range of coping strategies across different situations. The data has implications for theory development and the development of prevention and intervention programs for preschoolers. The last paper is a pilot study implemented in a school context, which discusses the efficacy of a coping program for children who have learning disabilities. Post program qualitative findings indicate school-based interventions are most effective when they are thoroughly integrated into overall school priorities.

An exploration into the coping strategies of preschoolers: A descriptive study

CHALMERS, K. (The University of Melbourne)

A great deal of information can be gleaned from self-regulation, adolescent and adult coping literature, however, there is clearly a lack of research on the coping strategies of young children. This study addresses this knowledge gap by exploring the coping strategies in the early years, paving the way for the development of programs and interventions aimed at improving young children's coping skills. Four-year-old children ($n = 46$) at an early learning centre in Melbourne were asked to describe their coping strategies when dealing with seven age-appropriate challenging situations. The interviews were recorded and transcribed for analysis. A mixed-method approach consisting of both quantitative and qualitative components was utilized in the study. Coping strategies were identified and clustered into productive and non-productive coping styles. Descriptive statistics were used to determine the frequency of coping strategies and styles used across seven situations, namely "separation from parents", "friendship", "making a choice", "teacher", "teasing", "night fears" and "don't like something". The results indicated that preschoolers could articulate ten coping strategies across the seven situations. The coping strategies that emerged from the data, were "play/do something else", "solve the problem", "think positive", "calm down", "ignore the problem", "seek comfort" "seek help", "do nothing/don't know", "cry/can't feel better" and "get angry". The results also suggest that children use specific coping strategies for specific situations. The most frequently used coping strategy for the friendship, choices, and teasing scenarios was problem solving. Comfort seeking was mostly sought in the separation scenario and help was sought when children were faced with something they didn't like. The capacity to identify a range of coping strategies related to specific situations has implications not only for theory development, but also for the design of effective prevention and intervention programs to help children more effectively deal with life challenges. This research highlights that previous studies have underestimated four year old children's ability to understand and report their coping efforts and provides rich qualitative data from which quantitative measures can be developed to

further understand the coping strategies of preschoolers.

Keywords: self-regulation, coping strategies, preschoolers, children's coping skills, children's coping skills

Coping with learning disabilities: a program for young adolescent students

FIRTH, N. (The Royal Children's Hospital and The Murdoch Childrens Research Institute)

Specific learning disabilities (SLD) are associated with risk of negative outcomes (e.g., school dropout). Those who are successful despite SLD respond proactively. However young people who have SLD are at risk of giving up and developing disruptive behaviour and are likely to need explicit assistance in using adaptive coping strategies. This pilot study investigates the efficacy of a coping program for children who have learning disabilities implemented within a model of whole school change. The intervention involves a withdrawal coping program for Grade 6 students who have SLD, nested within a classroom coping program involving all Grade 6 students, which in turn nests within whole school SLD professional development and change. The 10 session coping program involves awareness of current coping strategies, use of positive thinking, assertion, goal setting and problem solving. The 10 (minimum) extra withdrawal sessions held for students with SLD focus the coping strategies onto SLD-related situations and include role modeling by successful adults who have SLD. One-hundred and two grade 6 students from two Australian government schools were involved in the study. Twenty-three students have been assessed as having SLD. Measures include student and teacher surveys, end of semester school reports, teacher interviews, and a field diary. Post program qualitative data suggests the efficacy of the coping program was influenced by: the priority given by the school to the program; class climate of the withdrawal SLD group; and strength of the connection between the universal and SLD withdrawal class coping program. Teachers reported the overall usefulness and age appropriate level of the content and presentation of both the universal and SLD

components. These initial results suggest the overall efficacy of the intervention and of the model of implementation that is being used. The results also suggest school-based interventions are most effective when they are thoroughly integrated into overall school priorities. Funding is currently being sought for a randomised controlled trial of the SLD coping program implemented using the above model.

Keywords: specific learning disabilities, disruptive behaviour, children, coping strategies, school-based interventions

Adapting the best of coping program for adolescents with type 1 diabetes

SERLACHIUS, A. (The University of Melbourne)

Adolescents with type 1 diabetes mellitus (T1DM) are faced with the usual pressures of adolescence, as well as the added demands of living with a chronic illness that requires strict adherence to the treatment regimen. Adherence to treatment generally declines in adolescence, putting teens with T1DM at increased risk for long-term health complications. Psychosocial interventions teaching coping skills can help adolescents improve their quality of life and glycaemic control (Grey et al; 2000). The objective of this project is to adapt and trial a generic coping skills program, the Best of Coping (BOC), with adolescents with T1DM. In this study, focus groups were held with adolescents with T1DM to assess usability of the BOC and to receive feedback on areas requiring modification. In order to adapt the program before implementation, four focus groups were held with thirteen adolescents aged 13-17 years with T1DM. The participants were recruited from the diabetes outpatients clinic at a paediatric hospital. The focus groups explored diabetes-specific stressors and coping strategies and also discussed the modules offered in the original program. The qualitative data were analysed using Thematic Analysis, according to the guidelines by Braun and Clarke (2006). The focus group data suggests that adolescents with T1DM are using a variety of productive and non-productive coping techniques to manage diabetes-specific stressors such as parent/adolescent conflict and complying with diabetes self-care

behaviours. The feedback for adapting the program emphasised the need to incorporate self-management education, diabetes-specific information, and the use of online resources into the program. Across all four groups, participants expressed a strong desire to learn more about coping skills, and in particular how coping skills might be applied to enhance their diabetes self-care behaviours. Based on the qualitative data, important changes have been made to the program, in order to make the exercises and content more diabetes-specific. By participating in the adapted BOC, we hope that adolescents with T1DM will acquire coping skills adapted to enhance self-management, thereby influencing glycaemic control. The newly adapted program is currently being evaluated in a randomised controlled trial.

Keywords: type 1 diabetes mellitus, chronic illness, treatment, coping skills, diabetes self-care behaviours

The relationship between successful adaptation and psychopathology during the transition to adulthood: A person-centred approach

O'CONNOR, M. (The University of Melbourne)

As part of the positive psychology movement, there have been calls for an increased focus on successful development and the factors that promote the potential for adaptive functioning in young people. The transition to adulthood represents a window of opportunity for positive change in life course trajectories, as well as a period in which the incidence of risk behaviors and mental illness is relatively high. Recently, a multidimensional model of positive development during the transition to adulthood (at 19-20 years) has been developed using Structural Equation Modelling. Five interrelated dimensions of positive development were identified, including social competence, life satisfaction, trust and tolerance of others, trust in authorities and organisations, and civic action and engagement. The current study aims to examine how best to conceptualise the relationship of positive development to psychopathology. We drew on data from 1,158 participants in the Australian Temperament Project, a large scale longitudinal community

based study, which has followed the development of a cohort of Australian children from infancy to young adulthood. The study has collected a wealth of data across 14 waves from multiple informants, including parents, teachers, and the children themselves. Cluster analysis revealed four underlying groups: thriving civic activists (high on all aspects of positive development including civic engagement, and low in psychopathology), thriving (high on all dimensions of positive development except civic engagement, and low in psychopathology), idling (low on all dimension of positive development, and average in levels of psychopathology), and distressed (low on all aspects of positive development except civic engagement, with high levels of psychopathology). The person-centred analyses revealed a degree of heterogeneity in the sample in how positive development and psychopathology relate. The results suggest that it is possible be low in successful adaptation, whilst being no higher than average in psychopathology, consistent with the view that 'problem free does not mean fully prepared' (Pittman and Fleming, 2001). Implications for model, theory, and intervention development will be discussed.

Keywords: risk behaviours, adaptation, development, psychopathology, Australian Temperament Project

Faking, exaggerating, not really trying, deceiving, or lying? A malingering research update

Chair(s): SULLIVAN, K. (Queensland University of Technology)

Malingering is the deliberate feigning or exaggeration of symptoms for external incentive. This phenomenon is of relevance to several areas of psychology, with a comprehensive literature of "faking-good" in organisational contexts, "faking-bad" in neuropsychological contexts, and a large body of work on the development and application of psychopathology "lie" scales. Because of its very nature it is difficult to know the extent of malingering. However, current figures suggest that in various compensation-seeking and litigious populations, malingering occurs in 11-64% of cases referred for neuropsychological assessment (Langeluddecke & Lucas, 2004; Larrabee, 2003; Mittenberg et al 2002; Slick et al 2004; Sullivan et al 2007). Psychological studies have shown that the rate of malingering varies depending on: presenting diagnosis, assessment setting, referral type, and the method of detection that is used. The costs of malingering are high and these costs can impact a range of stakeholders including the general community via higher insurance premiums or job application costs, and genuine complainants who may not get the support they need because resources have been misdirected to those who are not in genuine need. Indeed, the failure to understand malingering and account for it in clinical practice threatens the integrity of our diagnostic procedures and undermines the credibility of the profession. If we can be tricked or deceived by exaggerated or fabricated psychological presentations, what safeguards are necessary to optimise clinical practise? This symposium will outline a model of malingering, discuss the ways in which we might use warnings to reduce malingering, and present an evaluation of a new test of malingering. The research presented in this

symposium will be of relevance to psychologists from a broad range of areas and will incorporate helpful recommendations for clinicians.

The ecological validity of the MMPI-2 Response Bias Scale

ELLIOTT, C. (Queensland University of Technology)

The Minnesota Multiphasic Personality Inventory-2 (MMPI-2, Butcher et al., 2001) contains several items found to reliably differentiate between individuals fabricating or exaggerating symptoms and those with genuine symptoms. These items comprise the MMPI-2 validity scales. The 28-item Response Bias Scale (RBS) is the first and only MMPI-2 validity scale created specifically to detect feigned cognitive impairment (FCI) (Gervais, Ben-Porath, Wygant, & Green, 2007). Four recent studies have investigated the RBS, however, only three of these were conducted independently of the development team, and of these studies, only one reported utility estimates (Gervais, Ben-Porath, Wygant, & Green, 2008; Larrabee, 2008; Nelson, Sweet, & Heilbronner, 2007; Whitney, Davis, Shepard, & Herman, 2008). Furthermore, this study relied on only one symptom validity test (SVT) to classify participants, which contravenes the standard usage in clinical practise of two or more SVTs in the detection of FCI (Rogers, 2008). The aim of this study was to address these limitations and provide an independent and rigorous investigation of the ecological validity of the RBS. 196 medicolegal archival cases were collected from a private neuropsychology practise in Brisbane. The cases were classified as honest responders or possible, probable or definite malingered neurocognitive deficit (MND) using Slick, Sherman and Iverson's (1999) criteria. Scores on the Test of Memory Malingered (TOMM; Tombaugh, 1996), Warrington's Recognition Memory Test (WRMT; Warrington, 1984), and all subtests of the Wechsler Adult Intelligence Scale-Third Edition (WAIS-III; Wechsler, 1997) were obtained. RBS scores were collated for each case from MMPI-2 results. Scores on the RBS were: (a) significantly higher in individuals classified as definite MND than the remaining groups, (b) significantly higher in individuals

classified as probable MND than individuals classified as possible MND or honest responders and (c) significantly higher in individuals classified as possible MND than those classified as honest responders. The RBS utility estimates were similar to those calculated in the development study (Gervais et al., 2007). The results of this study support the use of RBS as an ecologically valid indicator of FCI.

Keywords: Minnesota Multiphasic Personality Inventory-2, exaggeration, Response Bias Scale, feigned cognitive impairment, validity

The role of stereotypes in the generation of fake-job personality profiles

MAHAR, D. (Queensland University of Technology)

This research explored how stereotypes are used when faking personality tests in a vocational selection context. Experiment 1 was based on a new anchor-point approach to testing the strategies used by respondents when faking personality inventories and demonstrated that fake-job profiles appear to be based on the respondent's stereotype of members of the target occupation. Experiment 2 confirmed that fake-job profiles are based primarily on stereotypes of members of the target occupation and also showed that respondents tend to omit negative aspects of their stereotype when faking. Experiment 3 extended this finding by looking at how several stereotypes (or schema) are used to produce fake-job profiles. It was found that job-stereotypes and fake-good schema were strongly represented in fake-job profiles, with both fake-bad and honest schema being represented less strongly. This pattern was found in two target occupations which differed in terms of whether or not the respondents were undertaking training for that occupation. Stereotypes seem central to the process of faking, and subsequent research should attempt to integrate this line of research with current theories of personal and social identity and to extend it to other types of faking like malingering.

Keywords: stereotypes, faking, personality tests, vocational selection, fake-bad

An investigation of the effectiveness of warnings against malingered psychopathology

SCHENK, K. (Queensland University of Technology)

Malingering causes substantial social, legal, health and economic impacts. Whilst malingered neuropsychological deficits in litigious populations appear most prevalent (Greiffenstein, Baker, & Gola, 1994), investigations of the extent of faked psychological disorders, also suggest malingering is prevalent (i.e., Mittenberg et al., 2002; Gervais, Green, Allen, & Iverson, 2001; Strong, Green, & Schinka, 2000). It is estimated that approximately 3%-4% of all individuals who are psychiatrically assessed in Australia, are probably malingering (Sullivan et al., 2007). Malingering research to date has mostly focused on the construction and validation of detection methods (e.g., Franzen, Iverson, & McCracken, 1990; Meyers & Volbrecht, 2003; Schretlen, 1988) with relatively little research into potential deterrents. This is problematic as attorneys have reported spending time preparing clients for test-taking and some provide information pertaining to psychometric test validity scales (Victor & Abeles, 2004; Wetter & Corrigan, 1995) which undermines the detection capabilities of malingering tests. This underscores the need to develop malingering deterrents in parallel with research on detection methods. This study utilised a deterrence theory framework to examine the effects of warning simulators against malingering on measures of personality and psychopathology. Deterrence theory predicts that the most efficacious warnings are likely to be those that elicit subjective cost-benefit analyses and assessments of sanction certainty, severity and celerity from potential malingers (Pogarsky, Piquero, & Paternoster, 2004; Williams & Hawkins, 1986). 67 first-year psychology students were randomly allocated to one of three conditions: Unwarned malingers, warned malingers or controls. Participants in the two malingering groups were given a financial incentive to simulate believable psychological impairment. Warned malingers received an additional warning that the tests could detect malingering and

that detection would result in a loss of course credit for their involvement in the study. Controls were given standardised test performance instructions with no warning or incentive. It was hypothesized that the malingering incentive would be sufficient to induce malingering, but that a deterrence theory warning would have a subsequent deterrent effect. Using a between-groups simulation design, group differences on the clinical scales of the Personality Assessment Inventory (PAI) and the revised Symptom Check-list 90 (SCL-90-R) were assessed. Results demonstrated that warnings significantly altered test performance, such that warned malingers scored significantly lower (faked less) than unwarned malingers on the majority of the psychopathology scales and frequently approximated control group performances. Qualitative results revealed that the large majority of potential malingers decided not to mangle based on the deterrent warning whilst only a small minority were motivated to become more sophisticated malingers. These results support the effectiveness of a warning to complement existing malingering detection methods.

Keywords: malingering, neuropsychological deficits, faking, psychological disorders, personality

Malingering deterrent warnings: A new theoretical approach

KING, J. (Queensland University of Technology)

The clinical utility of warnings to deter potential malingering has been fiercely debated. Although the possible benefit of deterring clients from malingering by warning them about the possibility of detection has been demonstrated, potential disadvantages have also been suggested, including the possibility that such warnings may produce more subtle and harder to detect exaggeration. The present study aimed to operationalise the principles of deterrence theory to examine the impact of warnings of varying severity on simulated performance, in order to better understand whether warnings may be helpful in a neuropsychological assessment context. 78 participants were randomly assigned to a control group, an

unwarned simulator group, or one of two warned simulator groups. The warning groups comprised low- and high-level conditions depending on warning intensity. Simulator participants received no coaching about how to fake tests. Outcome variables were scores derived from the Test of Memory Malingering and Wechsler Memory Scale-III. Significantly fewer simulator participants in the high-level warning group malingered than in the unwarned group. Warned groups were then divided into those who reported malingering and those who did not report malingering, and the performance of these groups was compared to that of unwarned simulators and controls. Using this approach, results showed that participants who were deterred from malingering by warning performed no worse than controls. However, on a small number of tests, self-reported malingerers in the low-level warning group appeared less impaired than unwarned simulators. This pattern was not observed in the high-level warning condition. Partial support for both propositions was found; namely, that warnings may deter malingerers but that they may also make faking harder to detect. Although the group size was small in some of the follow-up analyses due to the impact of the warning on fully deterring participants from malingering, these findings suggest that a theoretically appropriate warning may have clinically useful deterrent results. This research contributes a new methodology for examining the impact of different warnings against each other to determine what factors may be clinically useful and what factors may actually harm the validity of clinical results.

Keywords: *malingering, exaggeration, deterrence theory, performance, neuropsychological assessment*

Towards a new model of successful faking

GRIEVE, R. (Queensland University of Technology)

Existing literature has failed to find robust relationships between individual differences and the ability to fake psychological tests, possibly due to limitations in how successful faking is operationalised. In order to fake, individuals must alter their original profile to create a particular impression. Currently,

successful faking is operationalised through statistical definitions, informant ratings, known groups comparisons, the use of archival and baseline data, and breaches of validity indexes. However, there are many methodological limitations to these approaches. This research proposed a three component model of successful faking to address this, where an original response is manipulated into a strategic response, which must match a criteria target. Further, by operationalising successful faking in this manner, this research takes into account the fact that individuals may have been successful in reaching their implicitly created profile, but that this may not have matched the criteria they were instructed to fake. Participants ($N=48$, 22 students and 26 non-students) completed the BDI-II honestly. Participants then faked the BDI-II as if they had no, mild, moderate and severe depression, as well as completing a checklist revealing which symptoms they thought indicated each level of depression. Findings were consistent with a three component model of successful faking, where individuals effectively changed their profile to what they believed was required, however this profile differed from the criteria defined by the psychometric norms of the test. One of the foremost issues for research in this area is the inconsistent manner in which successful faking is operationalised. This research allowed successful faking to be operationalised in an objective, quantifiable manner. Using this model as a template may allow researchers better understanding of the processes involved in faking, including the role of strategies and abilities in determining the outcome of test dissimulation.

Keywords: *faking, psychological tests, successful faking, depression, individual differences*

Malingering detection: From theory to practice

ANDERSON, D. (Private Practice)

The aim of this paper is to present an overview of recommendations for evaluating malingering in the neuropsychological assessment context. Clinical research relevant to clinical practice, with an emphasis on test performance, will also be reviewed. The method involved an overview of current

literature in relation to test selection and interpretation, including both measures developed specifically to detect malingering (e.g.: SIMS) and application of other tests to this process (e.g.: Rarely Missed Index using items from Logical Memory Recognition). Issues will be explored both in relation to clinical presentation of complaints as well as formal test performance. Clinical case examples will be used to illustrate. Results suggest that a combination of tests and knowledge of the research literature provide optimal, but imperfect, clinical detection. Recommendations will be presented for clinical practice, based on current research

Keywords: malingering, neuropsychological assessment, test performance

Families of children with disabilities: Current conceptual and research trends

Chair(s): REECE, J. (RMIT University)

Our knowledge about families of children with disabilities and chronic illness has greatly evolved over the last 20 years. Earlier models emphasized deficit oriented perspectives, which largely focused on the child's disability and parental pathology to explain the challenges experienced by these families; while contemporary studies have adopted more ecological, systems, and strengths-based approaches. Indeed, much attention is now provided to the examination of individual psychological well-being as well as that of various family subsystems including parent, sibling and parent-child dyads, acknowledging the systemic and dynamic nature of family life over the life span. Furthermore, the study of variables has expanded to include influences outside the family such as community and service-oriented factors, which are currently understood to have an impact on the adjustment of family members. In studying this population of families, empirical findings which inform the design of effective interventions and supports is ultimately of critical importance. Research methodologies that promote the development of explanatory models for family well-being and interventions are therefore more complex, incorporating mixed methods and sources of information other than the individual family members themselves. Taking into consideration these perspectives, the aim of the proposed symposium is to report on a series of studies that address variables associated with the well-being of and intervention with family members. Key learning objectives include: Increase delegates' knowledge of contemporary conceptual frameworks and empirical findings generated by various studies of family of children with disabilities and chronic illness in Australia; Increase delegates' understanding of research methodologies currently used in explaining psychological well-being and

informing the design of interventions in families of children with disabilities and chronic illness; and increase delegates' knowledge of proposed research directions in the study of families of children with disabilities and chronic illness.

The wellbeing of siblings of children with a disability or chronic illness in Australia

GIALLO, R. (Parenting Research Centre)

There has been growing interest in the wellbeing of siblings of children with a disability or chronic illness both in Australia and internationally. International research indicates that although most siblings are well adjusted, some do experience significant wellbeing or adjustment problems (Lamorey, 1999; Rossiter & Sharpe, 2001; Summers et al. 1994). The aim of this paper is to report on the wellbeing of siblings of children with a disability or chronic illness in Australia. A total of 133 families were recruited from a range of service providers across Australia. Parents reported on the wellbeing of siblings (aged 8-17 years) of children with a disability or chronic illness using the Strengths and Difficulties Questionnaire (Goodman et al., 1998). Results revealed that siblings had significantly higher ratings on the Total Difficulties, Conduct Problems, Hyperactivity, and Peer Problems subscales compared to Australian normative data (Mellor, 2005). Siblings also had significantly lower ratings on the Prosocial subscale. Approximately 16% of siblings scored in the clinical range on the Total Difficulties subscale. No demographic or disability or illness related characteristics were associated with sibling wellbeing. These findings highlight that a small proportion of siblings of children with a disability or chronic illness are at risk of adjustment difficulties. Further work is needed to understand why some siblings are at risk, and what is important in helping them to adjust as they grow and develop. The significance of these findings for the provision of sibling support and for professionals working with families of children with a disability or chronic illness will be discussed.

Keywords: *well-being, children, disability, chronic illness, siblings*

The psychological well-being of siblings of children with disabilities: The role of the family and the wider social community

DAVIS, K. (RMIT University)

Siblings of children with a disability are faced with ongoing challenges that have the potential to impact on their adjustment and well-being (Ross & Cuskelly, 2006; Stoneman, 2005). Given the increasing emphasis on promoting positive outcomes in siblings of children with disabilities, the overall aim of the current study was to identify the extent to which factors from within the family and the wider community contribute to the psychological adjustment of this population. A mixed method research design was used in this study. The sample was recruited from several early childhood intervention programs and special schools across metropolitan Melbourne, Australia. A total of 79 families participated, with siblings aged between 8 and 16 years. A control group was also recruited in order to account for differences on the outcome measures of adjustment (Strengths and Difficulties Questionnaire and Beck Self-Concept Inventory). Sibling adjustment was found to be associated with variables across individual (sibling temperament, sibling's perceived feelings of connectedness), family (family functioning) and wider social community levels. Adjustment and well-being was shown to be related to greater feelings of connectedness (Loneliness and Social Dissatisfaction Questionnaire), healthy family functioning (as measured by the Family Assessment Device), parental well-being (Depression, Anxiety, Stress Scale), and a lower frequency and intensity of daily hassles (e.g., my brother or sister does embarrassing things; my brother or sister draws attention to us). Findings will be discussed in terms of the present study's contribution to identifying the strongest predictors of sibling well-being, and the importance of this information in guiding best practice for positive family outcomes within families of children with disabilities. Findings and implications for practice will also be discussed in terms of the importance of incorporating a broader approach to intervention which focuses not only on the

needs of the child with a disability, but also other family members including siblings.

Keywords: *siblings, children, disability, well-being, psychological adjustment*

Factors affecting parental fatigue among parents of children with special needs.

SLATER, B. (University of Ballarat)

Fatigue is a commonly reported problem for parents of young typically developing children. It has been associated with wellbeing problems such as depression, and parenting outcomes such as less parenting warmth and involvement (Parenting Research Centre, 2008). Fatigue has recently been demonstrated to impact parents of typically developing children in regard to parenting, sleep, parental wellbeing, support needs and coping. There is currently no research investigating the relationship between parental fatigue, wellbeing and parenting for parents raising a child with either disabilities or chronic illness (hereafter referred to as special needs). Therefore, the aim of the study was to investigate fatigue in parents raising a child with special needs. It is anticipated that the findings from this study will guide best practice and inform future research targeting families of children with special needs. The paper was a survey study. 99 parents' (mainly mothers) raising a child (aged 2 – 15 years) with special needs reported on their fatigue and wellbeing in addition to demographic factors, child, family and parental factors, such as appraisal and personal factors and coping. Parents reported high levels of fatigue in addition to depression, anxiety and stress. A range of demographic, child, family and parent factors associated with fatigue were also identified. Results indicated that parental fatigue was associated with problems in physical and daily functioning. The majority of parents reported hassles including poor sleep, time constraints for tasks and self, constant monitoring of their child, in addition to worry about their child's future. Coping strategies described included talking, social contact and respite. Parents reported requiring help as a result of being tired and fatigued. The findings of this project contribute to knowledge about the wellbeing of parents raising a child with special needs. It

is one of the first studies to examine the relationships between fatigue, wellbeing, and parenting. The results will inform the development of interventions and supports to promote the wellbeing of parents of children with special needs, particularly in the management of fatigue.

Keywords: *fatigue, children, well-being, coping, special needs*

Developing interventions for families of young children with disabilities in community settings

GAVIDIA-PAYNE, S. (RMIT University)

Interventions for families of young children with disabilities have generally been guided by those developed for their counterparts without disabilities. Existing studies documenting such interventions address children's behavioural outcomes and parenting skills as implemented in clinical settings. Recent literature (Maul & Singer, 2009; Moes & Frea, 2002), however, suggests that the intervention focus needs to be broadened to include positive, alternative outcomes for children and families, as well as outcomes for practitioners from disciplines other than psychology who are charged with the delivery of such interventions in the community. Thus, the aim of this paper is twofold: (1) to report on the associations between practitioner competencies, children's social and behavioural characteristics and family well-being; and (2) to report on preliminary results of a community-based intervention, which incorporates these earlier findings. 64 families of young children ($M = 52$ months) with a developmental delay or disability were recruited from early childhood intervention programs in Victoria, Australia. A series of measures were used to assess parental reports of family quality of life, professional and social support, and child related hassles (i.e., behaviour problems). The community-based intervention study consisted of a smaller sample of families of young children with disabilities, focusing on two specific measures of parental stress and parenting sense of competence. Practitioner help-giving styles were the strongest predictors of family quality of life and parental well-being, whereas child hassles were significantly

associated with parental well-being. A pre-post study design for the community-based intervention yielded significant decreases in parental hassles, but not for general parent stress. No significant changes in parenting sense of competence were observed. Findings of the present study suggest that a range of child, family and practitioner variables are associated with child and parent outcomes in families of young children with disabilities. Additional research is required to tease out the differential effects of these variables and their contribution to the effectiveness of interventions for this population.

Keywords: children, disability, disability, family, social support

From data to practice: Translating empirical research into useful clinical outcomes in mental illness

Chair(s): ROSSELL, S. (Monash University)

Discussant(s): KULKARN, J. (Monash University / Alfred Hospital)

Funding bodies, researchers and clinicians all recognize the need for translating empirical research findings into clinical practice. Despite our best intentions this goal is not always achieved with many clinicians still in the dark with regards to the large array of research published. This symposium aims to bring together lead research scientists and senior clinicians to discuss four chronic mental illnesses: schizophrenia, anorexia, body dysmorphic disorder and depression. Each condition will be briefly introduced, followed by a description of some of the latest and most significant research findings; this will be concluded by a discussion on the importance of this research to clinical practice. The researcher and clinician will have worked closely together to produce this presentation of material. This symposium will be engaging for both researchers, clinicians, consumers and policy makers. It will improve communication between these disciplines. It will assist clinicians with knowing how to find and interpret evidence based research. Lastly, it will assist researchers in understanding the barriers present in translating research findings into clinical outcomes.

Schizophrenia

THOMAS, N. (Alfred Hospital), ROSSELL, S. (Monash University)

To discuss the implications of current cognitive and neuroimaging research on psychological interventions for schizophrenia, using the example of auditory hallucinations.

Developments in the cognitive neuropsychological understanding of auditory hallucinations are reviewed, and considered in terms of their implications for the development of psychological interventions. Cognitive models have evolved from conceptualizing auditory hallucinations in terms of inner speech, arising from faulty source monitoring. This explanation has been further characterized and has been shown to have a sensory perceptual origin. Neuroimaging evidence has confirmed abnormalities in the auditory cortices that relate to this deficit. Psychological interventions have been developed for people with persisting auditory hallucinations using principles of cognitive behavioural therapy. However, psychological interventions to date have mainly aimed to improve coping and reduce distress associated with hallucinations, rather than targeting a reduction in hallucinations themselves. Greater precision in our understanding of the underlying cognitive deficits provides a new direction in the reduction of the frequency of hallucinations as well as their impact

Keywords: *neuroimaging, psychological interventions, schizophrenia, auditory hallucinations, cognitive behavioural therapy*

Anorexia

MOUNTJOY, R. (La Trobe University), BOSANAC, P. (University of Melbourne)

Anorexia will be briefly introduced, followed by a description of some of the latest and most significant research findings; this will be concluded by a discussion on the importance of this research to clinical practice. Recent developments in the understanding and treatment of anorexia nervosa (AN) and their translation to clinical and population-based care in the Australian context are presented. The available evidence-base and the gaps are overviewed. Overall, there is a paucity of high-quality research into treatments for AN, albeit that a number of biological and psychological interventions show promise as avenues for further research. There are significant impediments to provision of comprehensive longitudinal care for people with AN within Australian mental health services. Evaluation of

novel strategies such as home-based support is required as part of enhancing options for Australians suffering with AN and their families. There is a gap between clinical practice guidelines and what is readily available and accessible, including the transition from acute medical and/or psychiatric care to 'stepped-care'. Whilst population-based approaches such as CEED in Victoria, the Centre for Eating and Dieting Disorders in NSW and school-based prevention programs have commendably been implemented, they require longer term evaluation from a variety of stakeholders' perspectives, including patient, carers, clinicians and healthcare service providers. Although a number of psychological interventions, particularly the Maudsley model, appear to be bearing therapeutic fruit and pharmacological research avenues continue to be explored, the challenge for clinicians and healthcare services is to provide care for AN patients amidst a fledgling evidence-base. Moreover, the challenge for clinicians and healthcare services is to provide consistency, continuity and quality of care for AN patients, given their inherent difficulties in engaging with health services and their potential 'slippage' into potential gaps in the continuum of care, particularly following transition from inpatient care. Although inpatient management of AN should probably be confined to dealing with medical risk, further exploration of day-based and intensive home-based care models is urgently required, if we are to establish the optimal continuum of specialist care for AN patients in Australia.

Keywords: *anorexia nervosa, research findings, mental health services, specialist care, clinical practice*

Body Dysmorphic Disorder

TOH, W. (University of Melbourne), CASTLE, D. (St Vincents Health)

To discuss how current cognitive and neuroimaging research into body dysmorphic disorder (BDD) has informed existing nosological debates and shaped clinical applications. Existing knowledge relating to the range of cognitive deficits and neurobiological anomalies observed in BDD are reviewed, and

considered in terms of its psychiatric classification as well as pharmacological and/or psychological interventions for the disorder. Available research has uncovered a range of cognitive deficits underlying BDD, especially in the areas of executive function, social information processing, and facial emotion perception. Two cognitive mechanisms: (i) selective attentional biases, and (ii) anomalies in basic visual processing, have been hypothesised as underlying the etiology and maintenance of the disorder. In addition, there appears to be a sound rationale for considering BDD as part of the obsessive-compulsive spectrum disorders (OCSs), and the degree of delusional beliefs involved would be more appropriately theorised on a dimensional basis. These findings have significant implications for the clinical management of BDD. Further research is necessary to elucidate an inclusive profile of the underlying cognitive deficits in BDD. These insights could in turn help to clarify current nosological debates and direct future treatment approaches.

Keywords: neuroimaging, body dysmorphic disorder, cognitive deficits, neurobiological anomalies, treatment

Depression

HOY, K. (Monash University), FITZGERALD, P. (Monash University)

To present the latest research into novel therapies for Treatment Resistant Depression (TRD), and discuss both the imminent and future clinical implications of this research. Treatment resistant depression is a considerable clinical problem, and to date there are only limited treatment options. We will review the latest attempts at developing effective and safe treatments for this population, in particular we will discuss the growing field of neuromodulation in psychiatry. Electroconvulsive therapy (ECT) is currently the only established treatment for TRD, but its use is complicated by the production of cognitive side effects. Over the last 20 years, a variety of brain stimulation techniques have been developed with the aim of producing effective clinical tools with minimal cognitive side effects. There has been considerable improvement to ECT itself in an

attempt to reduce cognitive side effects, a resurgence of interest in transcranial Direct Current Stimulation (tDCS), the development and refinement of Transcranial Magnetic Stimulation (TMS), the introduction of invasive brain stimulation into psychiatry (Deep Brain and Epidural Cortical Stimulation, (DBS, EpCS), and the emergence of Magnetic Seizure Therapy (MST). A substantive body of research is now emerging on the development and refinement of a range of old and new brain stimulation techniques that may be applied in depression treatment. While the exact place of many of these techniques in the spectrum of treatments for depression is as yet unknown, research that aims to ultimately provide clinicians and patients with evidence based treatment choices continues.

Keywords: treatment resistant depression, treatment, electroconvulsive therapy, cognitive side effects, brain stimulation techniques

Future directions for the assessment and treatment of autism and Asperger's disorder

Chair(s): RINEHART, N. (Monash University)

Discussant(s): TONGE, B. (Monash University)

Pervasive Developmental Disorders (PDDs) are arguably the most serious child onset neurodevelopmental conditions. The main forms of PDD are autism and Asperger's Disorder (AD). PDDs are characterised by social-communicative impairments together with stereotyped, restricted or repetitive behaviours or interests, and neuromotor impairments. The first three papers in this symposium will outline cutting-edge neurobiological human and animal experimental approaches which have the potential to lead to radical treatments for the core social-communicative symptoms of PDDs (Transcranial Magnetic Stimulation, Oxytocin, and a potential autism mouse model). All three of these approaches involve neurobiological interventions which directly or indirectly modulate fronto-striatal-cerebellar brain systems. The final two papers will describe findings from two novel techniques (3D motion analysis and ocular motor analysis) which are being used to non-invasively probe brain dysfunction in children with autism and AD. It is argued that the identification of unique 'neuromotor signatures' may lead to improved differential diagnostic testing procedures for autism and AD (Rinehart et al, *Nature Clinical Practice Neurology*, 2007). The ocular motor and gait data show that individuals with autism exhibit a distinct combination of cerebellar and fronto-striatal basal ganglia related movement disorders, while the movement disorder associated with AD is predominately associated with fronto-striatal basal ganglia disruption. Recent neuroimaging evidence (McAlonan, *Psych. Med.* Jul., 2009) supports the hypothesis that autism and AD are associated with differential brain abnormalities. The five research areas presented in this symposium are currently funded by the Australian National Health & Medical Research Council. This

symposium has three key learning objectives; To describe the foundation for the future generation of (1) neurobiological interventions and (2) clinical and neuromotor methods for assisting in the diagnosis of autism and AD. The third objective is to use current empirical data about the neurobiological and neurobehavioural separateness of autism and AD as a platform for discussing the proposal for DSM-V to drop the diagnostic category of 'Asperger's disorder'.

Oxytocin as a treatment to improve social functioning in autistic youth

FIELDING, J. (Monash University)

Recent developments in the field of neuroscience suggest the hormone and neuropeptide Oxytocin has a key role in human social behaviour. Laboratory data demonstrates that the administration of oxytocin nasal spray improves face perception, social memory, and performance on empathy tasks in non-clinical samples. Research is now growing to demonstrate a link between oxytocin and some of the social problems found in Autism Spectrum Disorders. Oxytocin may represent a radical new treatment hope to improve some of the socio-emotional difficulties observed in autistic spectrum populations. We present randomized controlled trials of oxytocin nasal spray to enhance social cognition, emotion perception, and social behaviour in youth with an Autism Spectrum Diagnosis. Results of these trials will be presented and implications to treatment and future research will be discussed.

Keywords: *oxytocin, autism spectrum disorder*

Transcranial magnetic stimulation in autism spectrum disorders: Mirror neurons, social cognition, and theory of mind

GUASTELLA, A. (University of Sydney)

Impairments in 'social relating' form the hallmark of autism spectrum disorders (ASD). Underlying neuropathophysiology, however, is largely unknown, thereby limiting the development of effective treatments. Transcranial magnetic stimulation (TMS), a

non-invasive means of stimulating the cortex via the administration of magnetic pulses, can be used to both investigate and modulate brain activity. Our current research uses TMS to (a) investigate the brain-basis of social cognitive deficits in ASD (via studies of the "mirror neuron system") and (b) determine whether TMS can be used to improve theory of mind in ASD. Individuals with ASD and matched controls (age: 14-40) underwent a TMS experiment designed to measure mirror neuron activation while observing goal-directed, social, and socio-emotional behaviours. Participants also completed measures of social cognition (e.g., facial affect processing, empathy). In a separate study, adults with ASD completed a clinical trial in which daily TMS treatments were administered to the medial prefrontal cortex for a two-week period. Participants received either the active treatment or a placebo form of TMS. Measures of social relating and theory of mind were administered before the first treatment, after the last treatment, and one-month after the last treatment. Participants with ASD displayed evidence of reduced mirror neuron activation when viewing goal-directed movements. During socio-emotional stimulus presentations, however, participants with ASD displayed a level of cortical excitability comparable to controls, suggesting intact mirror neuron activity when viewing this behaviour. Deep rTMS, meanwhile, appears to hold promise for the treatment of social impairments in ASD. ASD is associated with reduced mirror neuron activation when viewing biological motion in a neutral setting. This study demonstrates, however, that there may be some instances where a seemingly appropriate mirror neuron response can be elicited in ASD; specifically, a socio-emotional component appeared to resonate with sensorimotor systems equally well in each group. The link between mirror neuron activation and aspects of autism appears to be extremely complex, and there may be broader neurocognitive and neurophysiological processes involved. This research furthers our neurobiological understanding of ASD, but also provides exciting new directions for the development of neurobiological treatments for social impairments.

Keywords: *transcranial magnetic stimulation, autism*

Testing the "Extreme male brain theory"

ENTICOTT, P. (Monash University)

The 'extreme male brain' was first suggested by Hans Asperger in 1944 when he first described the presentation of Asperger Disorder. Almost 60 years later, Baron-Cohen proposes that the behaviours of Autism Spectrum Disorder are an exaggeration of typical sex differences and proposed the "Extreme Male Brain Theory". Arguing that males and females empathize differently, Baron-Cohen and associates have suggested that ASD is linked with sexual dimorphism by this difference in empathy and that exposure to high levels of prenatal androgens might cause this exaggeration. Indeed, patients with ASD have higher serum androgen levels. However, neural mechanism(s) through which androgens may act to cause this difference are not understood. We will describe a mouse model with hormonal disturbances which would be a useful tool to test this hypothesis.

Keywords: *extreme male brain, asperger, androgens*

Gait in children with autism and Asperger's disorder

BOON, W. C. (Florey Neuroscience Institutes)

Clinical descriptions and research evidence shows that individuals with autism and Asperger's disorder (AD) often have subtle gait or postural abnormalities. Examination of motor function may help to define if these disorders are on a symptom continuum, or are distinct. The aim of this study was to use three-dimensional gait analysis to quantify and characterise the full-body kinematic features of gait associated with high functioning autism (HFA) and AD. Three-dimensional gait data were captured from typically developing children (TD, $n = 15$) (10.4 ± 1.6 years), a group with high functioning autism (HFA, $n = 15$) (9.8 ± 2.0 years), and a group with AD ($n = 15$) (10.1 ± 1.5 years). Participants completed 5 walking trials at (i) preferred, (ii) fast and (iii) slow walking speed. A biomechanical model

calculated joint kinematics and spatio-temporal (ST) measures. Kinematic variables of interest included peak values and range of motion (ROM) of the upper limbs, trunk and lower limb joints and the centre of mass (COM), and within-subject step-to-step variability of the kinematic and ST data. Preliminary analysis found the AD group walked with a significantly wider base than the TD group. Stride length variability differed at preferred speed, with increased variability in the HFA group. Both clinical groups had significantly increased COM ROM (an 'up and down' motion of the body) relative to the TD group at all speeds, with the HFA group also significantly increased relative to the AD group in the preferred and fast walking conditions. In all speed conditions, groups differed in the variability of almost all upper and lower body kinematics. Definitive results from an updated analysis of a larger sample ($n \approx 100$) will be presented at the symposium. These preliminary findings are consistent with certain clinical observations of HFA and AD gait and support previous studies suggesting that upper body kinematic abnormalities may be key features that distinguish the subtle gait impairments in both disorders. Emerging data suggests that kinematic analysis at varied speeds may identify gait differences between these groups.

Keywords: *Gait, children, autism*

Eye movements in children with autism and Asperger's disorder

MCGINLEY, J. (Murdoch Childrens Research Institute)

The aims of this preliminary investigation were to use ocular motor technologies to: (1) profile and contrast ocular motor deficits in autism and Asperger's Disorder (AD); (2) investigate whether the neurobiological underpinnings of autism and AD are different, supporting their clinical separateness as defined in the DSM-IV-TR; (3) increase our understanding of the functional integrity of cerebellar and fronto-striatal systems in these disorders. These aims were addressed collectively, by using a battery of eye movement protocols to explore and compare the integrity of saccadic and smooth pursuit eye movement in young individuals

with high functioning autism (HFA), AD, and age and IQ-matched controls (10- 18 years, IQ > 70). Differentiation of performance derived from an evaluation of ocular motor characteristics thought to reflect disruption to fronto-striatal and cerebellar systems. For eye movements, fronto-striatal dysfunction is characterized by impaired initiation/facilitation of movement, and poor inhibition of extraneous/inappropriate movement. Conversely, cerebellar dysfunction is characterized by alterations to the velocity profile of movements, including skewed waveforms and impaired saccade main sequence (peak velocity / amplitude relationship), as well as trial-to-trial variability. Disruption to each of these systems was predicted in HFA, but primarily to the fronto-striatal system in AD. The range of differences revealed between control and HFA and AD groups indeed suggest that the neurobiological underpinnings of these disorders may be differentially disrupted. While cerebellar and fronto-striatal deficits were clearly evident across all tasks, the profile of deficits found was markedly dissimilar for HFA and AD groups. This preliminary investigation suggests that dissociation of motor deficits is possible in autism and AD using ocular motor techniques. Importantly, there are a number of advantages to using eye movements as a research tool. As well as being easily accessible to clinical observation and analysis, the eyes exhibits a restricted range of movement, lack inertia, and move against an unchanging mechanical load. Movements are highly stereotyped and reproducible in response to specific stimuli, and the neural systems controlling eye movements have been extensively investigated, permitting insights into patterns of abnormality that provide important clues about the location of neuropathology.

Keywords: *Eye movement, autism, asperger*

Gambling: Examining the influence of culture and age on behavior

Chair(s): MOORE, S. (Swinburne University of Technology)

Discussant(s): LADOUCEUR, R. (Université Laval)

Gambling is a popular pastime in many countries, but can cause problems for significant proportions of gamblers, particularly regular gamblers. As such, gambling has become an area of research interest within psychology in an attempt to inform theory and clinical practice. However, the majority of research has examined adult Anglo-Europeans. This symposium will report on new research into gambling behaviors of two under-examined, but potentially vulnerable, groups: The young and those from culturally and linguistically diverse (CALD) backgrounds. Paul Delfabbro from the University of Adelaide will commence, citing new longitudinal research with young gamblers within the existing literature. He will particularly report on the diversity and stability of gambling habits in adolescents, showing that adolescent gambling is not a good predictor of later gambling behavior. Keis Ohtsuka from Victoria University will then discuss research into cultural influences on gambling cognitions around luck and winning. He will show that definitions of luck align with a variety of irrational cognitions including obtaining favourable outcomes for decisions, hubris associated with winning and gambler's fallacy. Susan Moore and Anna Thomas from Swinburne University will then combine the discussion of youth and CALD influences, examining risk factors for excessive gambling among international and local university students. Susan Moore's research finds international students gambled less frequently than local students but experienced higher rates of gambling problems. Gambling problems were associated with a range of academic, relationship, financial and acculturation-related stressors. Anna Thomas extends this research, examining the applicability of a stress-motivation process

model of problem gambling. Her research finds better support for the model in international students compared to locals. Professor Robert Ladouceur from Université Laval (Canada) will act as discussant for the symposium. The key learning objectives of this symposium are: (1) Insight into the stability and diversity of gambling behavior in adolescent and young adult gamblers; (2) Understanding of cultural influences on gambling cognitions around luck and winning; (3) Consideration of the impact of stressors on gambling behavior in university students across different CALD groupings; (4) Understanding of the combined effect of stress, socio-cultural adaptation, motivation, social support and help seeking on gambling behavior in different cultural groups.

Using longitudinal analysis to elucidate the stability of gambling in young people

DELFABBRO, P. (University of Adelaide)

Although numerous cross-sectional studies have been conducted to examine the prevalence of gambling and problem gambling in populations of young people, there is growing interest in the importance of using prospective longitudinal studies to examine the stability of gambling patterns as well as the relationship between adolescent and adult gambling. For example, do young people who gamble at one point in time continue to do so in the future? To what extent does adolescent gambling place young people at risk of gambling-related problems as adults? This paper reviews the existing international research evidence relating to longitudinal gambling patterns in people aged < 30 years with a particular focus on under-aged gambling. Included in this paper will be a discussion of the methodological strengths and weaknesses of different forms of longitudinal design as well as findings from two recent South Australian studies. The first of these studies described involves an analysis of the gambling habits of 578 young people who were tracked for four years from mid-adolescence (age 15 years) into adulthood (18-19 years) with standardised participation data collected every year. Another study involves a sample of young people aged 16-17 years recruited randomly through a telephone survey in 2005

and tracked for 3 years thereafter. Both of these studies involve prospective longitudinal designs and standardized measures of gambling participation and pathological gambling. Study One showed how gambling patterns in young people are subject to considerable individual variability. Adolescent gambling at age 15 is not a strong predictor of adult gambling. Gender differences in gambling preferences observed during adulthood are also observable during adolescence, although these differences become more distinct over time. Study Two showed that pathological gambling during adolescence is not a reliable predictor of problem gambling during adulthood. The findings highlight the potential divergence in results that arise from basing conclusions on individual-level and longitudinal analyses as opposed to cross-sectional designs. Both studies show that risk-taking during adolescence does not always translate into problematic behaviour during adulthood. The findings also provide conceptual insights into the nature of problematic behaviour and its developmental course in younger populations.

Keywords: *gambling, gender, adolescence, longitudinal design*

Cultural influences in gambling cognition – is the concept of luck and winning universal or cultural-specific?

OHTSUKA, K. (Victoria University)

This paper critically reviews the current state of gambling research regarding the relationship between cultures and gambling behaviour. While anecdotal evidence abounds highlighting the vulnerability of gamblers from culturally and linguistically diverse (CALD) backgrounds to develop problem gambling, systematic research on the link between culture and gambling cognition is scarce. One of the questions yet to be answered is if the concept of luck and winning are culture-specific or universal. The aim of this research was to explore subjective views of electronic gaming machine players from CALD communities regarding luck and winning. A total of 60 Australian electronic gambling machine gamblers from Chinese, Greek, Vietnamese, and Anglo backgrounds were recruited for the interviews. Procedure: Qualitative in-depth

interviews were conducted to explore the subjective views of gamblers regarding the notion of luck and winning. Interviewees described a variety of views regarding luck and winning. Although qualitative research methods focus on unveiling subjective views and individual experiences associated with gambling, luck is defined in terms of obtaining the favourable outcomes (i.e., winning money) for gamblers' betting decisions, hubris associated with winning, gamblers' fallacy (disregarding the independence of each spin, the analysis of recent spin outcomes would indicate the future prospects of winning). Higher levels of education do not necessarily protect gamblers from developing gamblers' fallacy. Rather some interviewees with university degrees employed more elaborate explanatory schemas in describing misconceptions. Further research is necessary to explore if this link between educational attainment and at-risk cognition is culturally specific or universal. Research on culture and gambling behaviour is still in its infancy and needs systematic effort to investigate the topic from multidisciplinary view points. The author believes that the research findings should be analyzed to see if the explanatory framework or schema on luck and winning can be considered universal or culturally specific. Recommendations for future research include the use of qualitative research methods to focus on subjective meanings, the importance of cultural competence of research engagement with CALD community participants, and the implications for psychological intervention dealing with entrenched cultural beliefs in a culturally competent manner.

Keywords: *gambling, culturally and linguistically diverse backgrounds, culture, gambling, luck*

Gambling among international and domestic university students and its relationship to life stressors

MOORE, S. (Swinburne University of Technology)

No reliable profiles of the extent of gambling or associated risk factors are currently available for the tertiary student population. The aims of this research were to (a) chart the extent of social/problem gambling among

international and domestic university students across two universities in Victoria, Australia (b) assess whether there were particular vulnerabilities in specific cultural and linguistically diverse (CALD) groups within the international student population and (c) examine a range of stress-related variables potentially associated with problem gambling among students. The invitation to take part in an internet or paper-based survey was emailed to groups of students, posted on student websites and advertised on flyers. The survey assessed gambling-related variables, academic, relationship and financial stressors and problems adjusting to university and general social life. Data is to be collected from a large sample of international and domestic students. To date, information is available from approximately 123 domestic students (52 male, 70 female, mean age 24.5 years) and 188 international students (100 male, 88 female, mean age 24.1 years). The results show that (a) domestic students gambled more than international students but their problem gambling rates were only about half those of the international students, (b) students born in Asian countries or from the Indian sub-continent showed greater vulnerabilities to problem gambling than other groups (c) problem gambling was associated with academic, relationship and financial stress, as well as 'acculturation' problems with university studies and peers. Additionally, life stresses and problems coping with communication, safety, peer pressure and finances were higher among international students. International students can experience social isolation, loneliness, financial and academic stresses in their temporary country, exacerbated by cultural and language differences and both perceived and real racism. Such vulnerabilities can result in higher rates of risk-taking behaviours such as gambling to excess. Additionally, the relative freedom of the Australian gambling culture can pose control difficulties for those for whom gambling venues provide a safe environment where daily stresses can be temporarily forgotten.

Keywords: tertiary students, gambling, international students, cultural and linguistically diverse backgrounds, problem gambling

Stress, adaptation, social support and gambling motivation: Predicting gambling problems among international and domestic university students

THOMAS, A. (Swinburne University of Technology)

Gambling research conducted with university students is rarely focussed on university-related factors. Further, almost nothing is known about whether underlying gambling motivation is similar or different for domestic students (DS) versus international students (IS). This research aimed to see whether a process model of problem gambling developed with adults generalized to DS and IS. DS and IS participated in an online survey about wellbeing and gambling. Recruitment was via direct email and both electronic and paper flyers. Information was collected on life stressors; socio-cultural adaptation; depression; social support; gambling motivations; severity of gambling problems and both informal and formal help seeking. Data was collected from 136 DS aged 18-58 years (61 males $M = 23.48$ years, $SD = 6.87$; 75 females $M = 25.17$ years, $SD = 9.16$) and 222 IS aged 18-45 years (124 males $M = 23.63$ years, $SD = 3.43$; 98 females $M = 23.42$ years, $SD = 4.75$). Results showed that there was reasonable support for the model for IS. Those low on socio-cultural adaptation, depressed and who relied on informal help-seeking tended to be more motivated to gamble as a way of escaping from problems and because it was accessible. Further, IS who gambled to escape, because it was accessible and for the social environment tended to experience more severe gambling problems than those who did not gamble for these reasons. There was only limited support for the model for DS. Those low on socio-cultural adaptation had a greater tendency towards escapist gambling; however no other variables predicted gambling motivations. As expected, gambling to escape and because it was accessible predicted severity of gambling problems. Contrary to expectations, neither life stressors nor social support predicted gambling motivation in either group. The model of problem gambling was only partially supported in the DS sample. Gambling problems in young people may be transitory rather than chronic (Slutske et al.,

2003) and may be more related to experimentation and impulsiveness than coping with life issues. Interestingly, there was more support for the model in IS, suggesting there is a greater tendency for gambling motivations in this group to be related to life concerns and depression.

Keywords: *gambling, international students, domestic students, socio-cultural adaptation, young people*

Giving peace psychology away in Australia: A symposium on theory, data, politics and practicality

Chair(s): LOUIS, W. (University of Queensland)

Discussant(s): BOENHKE, K. (Jacobs University)

In this symposium, four psychologists involved in “giving psychology away” in Australia discuss research projects and field applications in terms of not only theory and data, but also politics and practicality – what has been done; how it happened; what the barriers were; and lessons learned for the future. The talks span three levels of analysis and sources of activity: the psychologists in the public interest team of the Australian Psychological Society; the Psychologists for Peace interest group; and a specific intervention program for conflict resolution and cultural diversity, the Enhancing Relationships in School Communities project. At each level, an outline of achievements is given, relevant theoretical frameworks and/or are described, and of some of the political and resource challenges are described, as well as how these were overcome, and perceptions of what challenges and lessons lie ahead for the future. The symposium will introduce the scope of Australian peace psychology to both visitors from overseas and Australians unfamiliar with peace psychology. A distinguished international peace psychology scholar and practitioner will serve as discussant. By sharing ideas and enthusiasm for translating peace psychology into concrete applications and applications into exciting research questions and findings, the symposium aims to stimulate discussion and build links among the world community of peace researchers, activists, and policy-makers. The three key learning objectives of the symposium are: 1) to communicate some of the diversity of Australian peace psychology and its applied and research projects; 2) to share information about the development and implementation of peace psychology projects and the political and bureaucratic factors which have facilitated or

impeded the projects; 3) to stimulate discussion concerning the projects on the horizon and challenges and needs in the next decade of peace psychology.

Working as a psychologist in the public interest in Australia

BURKE, S. (Australian Psychological Society),
GRIDLEY, H. (Australian Psychological Society)

The aim of this paper is to provide an overview of recent and past initiatives of the public interest psychologists at the Australian Psychological Society (APS), including responses to the Victorian Bushfires, sustainability and climate change, peace and conflict resolution, and reconciliation. The primary focus is on describing and discussing how the projects were developed and implemented, and how political sensitivities and obstacles such as funding and time were overcome, and where the public interest psychologists will go next. This discussion will focus on the conceptual and political levels of analysis. The data will consist of case studies of particular projects and resources developed at the APS and/or in collaboration with the APS interest groups. In this paper, the variety of ways in which psychologists “give psychology away” in Australia is sketched. Strengths and challenges of the current system are discussed. On the plus side, in Australia significant resources and goodwill are channeled into concrete outcomes through the activities of dedicated staff who produce programs, research projects, and resources such as pamphlets and policy statements, some of which will be discussed in the paper. Major challenges occur, inevitably, around staffing and funding. Prospects for the future are discussed as well as dreams of positive change. Psychologists in the public interest at the APS do fantastic work on a variety of projects, and it is a great pleasure to share these with colleagues from around the world at ICAP. A lively discussion and sharing of ideas for even more energy and achievement in this sector is anticipated!

Keywords: *climate change, Victorian bushfires, sustainability, conflict resolution*

Peace psychology in Australia: From interest group to interested group researcher

LOUIS, W. (University of Queensland)

This paper has two aims. First, I will describe some of the activities and projects of Psychologists for Peace, an interest group of the Australian Psychological Society whose members share an aim of working to promote peace in the world and to prevent conflict through psychological research, education and advocacy. Second, I will describe some research in peace psychology in the Australian context, with a focus on how the applied peace work and projects have fed into research questions. While the first part of my discussion focuses on case studies of recent projects of Psychologists for Peace, the second part outlines a series of experimental and field studies in social psychology, aiming to understand and predict dependent variables such as engagement in peace activism; support for political violence; and support for Reconciliation with Indigenous Australians vs. anti-Aboriginal prejudice. Via case studies of Psychologists for Peace initiatives -- from pamphlets and posters to podcasts and prizes -- I outline a series of applications of peace psychology research and discuss the perceived impact on practitioners as well as members of the public. The studies outlined in the second part of the talk focus on barriers to peace as well as enabling factors. The results demonstrated the critical role of group identities and social norms (group-based standards or rules for behaviour). By “giving psychology away” with concrete projects, new ideas for theory and innovation are generated. This talk aims to introduce a sampling of Australian peace psychology to overseas visitors and interested Australians, hoping to share ideas and enthusiasm for translating peace psychology into concrete applications and applications into exciting new research.

Keywords: *Psychologists for Peace, Australian Psychological Society, conflict, peace activism, reconciliation*

Quantitative outcomes of the second phase of the Enhancing Relationships in School Communities project: Explorations in

conflict resolution, cultural diversity and program implementation in primary schools

WERTHEIM, E. (University of Melbourne),
CROCKER, J. (University of Melbourne), WHITE, A.
(University of Melbourne), FREEMAN, E.
(University of Melbourne), TRINDER, M.
(University of Melbourne), MACNAUGHTON, G.
(University of Melbourne), SRINIVASAN, P.
(University of Melbourne)

This paper reports on final outcomes of the second cohort completing the Enhancing Relationships in School Communities (ERIS) project. The project aims to improve methods for assisting schools to develop productive conflict handling processes and to positively address issues of cultural diversity. The aim of this paper is to evaluate quantitatively the outcomes of the ERIS program in terms of school implementation of ERIS ideas and activities and teacher and student learning related to conflict resolution and respect for cultural diversity. Thirteen Victorian schools were matched and randomly assigned to either a full-intervention group or a comparison group. In the intervention, ten primary schools took part in the 18-month ERIS program, which provided a professional development program to 3-5 person core (professional learning) teams. Core teams attended seven full days of professional learning and received four school visits by ERIS staff. The full school staff also attended one of those workshops. Three comparison schools were provided with curriculum materials, but received no further support. Staff from all schools were asked to complete questionnaires at pre and post-program. Measures assessed cooperative conflict resolution and cultural diversity knowledge, skills and attitudes through rating scales and scenario-based measures; teacher perceptions of their students' knowledge, skills and behaviours in these areas; and hours taught of related curriculum. Field notes were compiled during school support visits to assess the degree schools had put ERIS into policy and practice and core teams had provided ERIS professional development for staff in their schools. Pre-program and post-program comparisons are reported examining differences between intervention school core team members, other staff from intervention

schools, and non-intervention comparison staff at post-program (ANOVAs/ANCOVAs or nonparametric tests as needed). Schools responded positively to the ERIS program, implementing a range of related initiatives. Conclusions focus on the degree to which teachers in ERIS intervention schools, compared to control school teachers, increased their knowledge and skills in conflict resolution and cultural diversity, and viewed their students as increasing knowledge and skills. Benefits for non-core team staff reflected successful dissemination of ideas throughout the schools.

Keywords: Enhancing Relationships in School Communities (ERIS) project, conflict handling, cultural diversity, professional development, school

The Enhancing Relationships in School Communities project: Challenges and achievements in working with primary schools to enhance their cooperative conflict resolution processes and promote respect for cultural diversity

FREEMAN, E. (University of Melbourne), TRINDER, M. (University of Melbourne), MACNAUGHTON, G. (University of Melbourne), SRINIVASAN, P. (University of Melbourne), DAVIS, K. (University of Melbourne), WERTHEIM, E. (University of Melbourne)

The aim of this paper is to describe lessons learned and qualitative outcomes of Phase 2 of the Enhancing Relationships in School Communities (ERIS) project. Phase 2 of the ERIS program was a collaboration between the Australian Psychological Society (APS; Psychologists for Peace Interest Group), Catholic Education Office Melbourne, two primary schools and two universities. The program assists primary schools to develop more productive conflict handling processes and to positively address issues of cultural diversity. This paper describes a range of challenges that the schools faced and teachers' perceptions of the most significant changes that took place in their schools as a result of their participation in the ERIS project. Ten Victorian primary schools (state and Catholic, with varying levels of cultural and linguistic diversity represented in each school) took part

in an 18-month professional development program (ERIS), in which three-five person core (professional learning) teams participated in seven professional learning workshops and received four school support visits. The full school staff also attended a one-day workshop. Field notes were compiled during the support visits tracking challenges faced by schools in implementing ERIS ideas and strategies implemented in each school. At the end of the program, two-three core team members from each school were interviewed about their "significant change stories" to understand the most important shifts and accomplishments in each school. The significant change stories and field notes were analysed qualitatively to examine the most important challenges described by staff, and the changes that teachers viewed as most impactful. The variety of ways in which the ERIS program was implemented in the unique context of each school is described. Schools reported a range of implementation challenges and highlighted the importance of sustained professional development, accompanied by school support visits, to allow staff to engage fully with complex issues and concepts and to apply them successfully to the individual school context. Schools successfully implemented a variety of ERIS-related initiatives, including teaching students ERIS curriculum, and applying ERIS ideas in the classroom, on yard duty, and with parents and fellow staff.

Keywords: Enhancing Relationships in School Communities (ERIS) project, Australian Psychological Society, primary school, conflict handling, professional development

Globalization and research paradigms: Need for reflection

Chair(s): BHAWUK, D. P. S. (University of Hawaii)

Discussant(s): YAMAGUCHI, S. (University of Tokyo)

Globalization has impacted human psychology and societal development all over the world in multiple ways, yet researchers are committed to one way of doing research and are embedded in the logical positivist paradigm. This is most apparent in the area of industrial and organizational psychology where researchers tend to operate from a basic assumption that culture does not have much impact on organizational constructs, and ignore the role of organizations in societal development. Despite much research in cross-cultural psychology and organizations, we still find industrial and organizational psychology dominated by constructs like job satisfaction, organizational commitment, organizational citizenship behavior, performance appraisal, organizational justice, work stress, burn out, and so forth that have emerged in the west as if there are no others constructs in developing societies that are meaningful. It is no surprise that pseudo-etic research methodology dominates and remains the mainstream of industrial organizational psychological research. This symposium is an invitation to pause and reflect if we should continue on this path as researchers or change course in the new world that is not converging with globalization (Bhawuk, 2008; Berry, 2008; Kim & Bhawuk, 2008). Three papers that constitute programs of research in India and Japan are presented to raise awareness about the need for reflection about how we should proceed in the future. Anand Prakash presents Indian perspectives on meaning of work, and how it enriches the existing western and cross-cultural literature. Shiho Imashiro presents observations from field studies from Japan to enlighten the research stream on person-organization fit emerging from the west. Sonia Nongmaithem & Nachiketa Tripathi present findings from Indian public sector organizations about organizational learning and what it means

in India. These three studies clearly demonstrate the need for changing course and exploring others methods to enrich our understanding of industrial and organizational psychology internationally, and especially its role in societal development. Bhawuk will discuss the need to move away from pseudo-etic to emic driven research grounded in indigenous psychological research, and present a model for how organizational psychology can include culture to address the needs of societal development.

Meaning of work: Perspectives from India

PRAKASH, A. (University of Delhi)

Meaning of work (MOW) has emerged as one of the binding constructs from the field of industrial and organizational psychology. The emerging scenario across the globe, however, evinces that people do share diverse meanings of work as situated in their respective cultural meaning systems and practices. The construct of MOW, as used in industrial and organizational theories, is simultaneously related to representation of reality of work life as well as a source of motivation for performance. In the last few decades several international projects have been undertaken to map this construct in the different parts of the world. Most of them have subscribed to one conceptual model and have ventured at portraying quantitative variations within some standardized theoretical frame of reference. The next generation of MOW research needs to go beyond this and invest into a deeper and intense appreciation at discursive level to understand the cultural shades of MOW as embedded in specific cultural contexts. Keeping the above as a point of departure in this program of research in India, we examined the cultural constructions of MOW. Drawing from cultural experiences from India, we present Indian emic voices. Theoretical contributions and implications for future research are discussed.

Keywords: *meaning of work, India, organizational psychology, performance*

The reality of the evaluation of person-organization fit in a selection interview in Japan

IMASHIRO, S. (University of Tokyo)

Recently, the fit between person and organization (person-organization fit or P-O-fit) has been attracting attention among Industrial/Organizational psychologists because the level of fit was shown to predict the positive attitudes toward organizations such as satisfaction and commitment among the employees. Thus, the valid evaluation of fit in the selection process is important for organizations. Some researchers claim that the best way to valuate the fit is through selection interview. Although a few studies have been done to examine the P-O fit evaluation in selection interviews, they failed to separate the P-O fit from the interviewer-interviewee fit. This study aims to verify whether the evaluation of P-O fit is possible in selection interview by separating it from the evaluation of interviewer-interviewee fit. Also, it is examined whether interviewers' perception of their organizational culture may cause the idiosyncratic difference in the P-O fit evaluation among interviewers. Using the data collected through the actual selection process of a service organization in Japan, multi-level analysis was conducted, with the interviewees' general values and the discrepancy between their values and those of their interviewers at the first level and with the interviewers' perception of organizational culture at the second level. The results showed that among different interviewers, the same values of applicants were evaluated, which suggests that the P-O fit was actually evaluated. At the same time, it was shown that the interviewees' values were evaluated to different extent among the interviewers, according to their differential perception of the organizational culture, even though they belonged to the same organization.

Keywords: *person-organization fit, satisfaction, commitment, organisational culture*

Organizational learning and the role of contextual variables in Indian public sector organizations: A qualitative study NONGMAITHEM, S. (Indian

Institute of Technology), TRIPATHI, N. (Indian Institute of Technology)

The present study investigated the existence of organizational learning and the role of contextual variables in Indian public sector organizations. Specifically, it tried to answer the following questions: (1) Do members of organizations share knowledge and information? (2) What are the mechanisms that facilitate such processes? (3) Do these processes impact on the performance of the organizations in terms of profitability of the organizations? (4) What are the roles of leaders, organizational culture and strategies in terms of facilitating these processes? (5) Through these processes, are the organizations able to learn and then create knowledge base, which would help the organization in innovation, in the future? An interview schedule comprising of 12 different items, based on the above questions, was used to conduct in-depth interviews of 30 top-level managers from 13 Indian public sector organizations across 3 metropolitan cities. Content analysis revealed several themes. In most of the organizations, there were sharing of information and expertise amongst the organizational members, both at individual and organizational level. Sharing at organizational level indicates existence of organizational learning. The responses of the interviewees, further, showed patterns of formal and informal mechanisms, which facilitated the process of sharing amongst the organizational members. It was also found that documentation and retrieval of information is given due emphasis in many of the organizations as this helps in maintaining the repertoire of knowledge, which can be used by the present members as well as future members. Moreover, the results of this study showed that leadership, comprising both transformational and transactional style, emerged as an important factor, which influenced the learning and sharing of information and expertise. Organizational culture present in these organizations comprised characteristics such as transparency, accountability, trust, openness, accessibility of the leaders, etc., which are similar to the components of learning culture. Also, the positive role of proactive strategy emerged from the analysis. Top executives

interviewed in the present study acknowledged the role of organizational learning towards better performance and profitability. Finally, there were indications about the unexplored link between organizational structure and organizational learning.

Keywords: organisational learning, India, public sector, organisational culture, leadership

A theoretical framework for social change: Role of ecology, history, culture, zeitgeist, institutions, & leaders

BHAWUK, D. P. S (University of Hawaii at Manoa)

As ecology and history shape culture, any discussion of societal development needs to be couched in the historical context since the present emerges from the interaction between the past and the zeitgeist (Bhawuk, 2003, 2010; Liu, in press; Liu & Hilton, 2005; Triandis, 1994). It is important to do so as this would allow us to be objective about the role of colonialism and the zeitgeist of dominant logical positivism in shaping the way we view ourselves, our profession, and the knowledge we create. It would be ostrich like to try to bury the pathological consequences of colonialism and its impact on who we are, what we study and how (Bhawuk, 2007, 2008a; Smith, 1999). However, delving too much in the history of colonialism and its impact on knowledge creation can also take away the freedom to break the fetters of intellectual colonization and soar in the indigenous space of insight and wisdom. Hwang (2004) cogently argued that for indigenous psychologies to guide economic development in developing societies researchers will need to reflect philosophically and not follow the western philosophical positions on the meaning of modernization. Often it is assumed that the Big-Bang of knowledge creation started with renaissance in the West in the fourteenth century. It is important to remember that China and India were the first world economically until 1760 and produced 75% of the world GDP (Bhawuk, Munusamy, Bechtold, & Sakuda, 2007; Kennedy, 1988). What is considered first world today was third world up to 1760. The cultural wealth in these countries has not been lost, and people in these

countries only need to reorient themselves to their cultural paradigms, which is already happening. In this paper, an attempt is made to present a model of societal development that synthesizes indigenous insights, by including history, ecology, zeitgeist, organizations, and leaders who drive changes in societies. It is argued that such a model allows capturing indigenous worldviews, and can be tested “empirically,” where empirically does not necessarily mean following the logical positivist worldview and methodology.

Keywords: *social change, ecology, zeitgeist, colonialism, leadership*

Health behaviour interventions in low and middle income countries

Chair(s): PELTZER, K. (HSRC)

There is an urgent need of health psychology and behavioural medicine to fight disease and to promote health in low and middle income countries. This symposium will give an overview and selected examples on targeted health behaviours including diet-related risk factors and physical inactivity, sexual and reproductive health, addictive substances, injury and violence, preventive health exams, mental health, adherence to treatment in medical conditions, vector control, and hygiene behaviour.

Overview on health behaviour interventions in low and middle income countries

PELTZER, K. (HSRC)

This paper will give an overview on targeted health behaviours in low and middle income countries including diet-related risk factors and physical inactivity, sexual and reproductive health, addictive substances, injury and violence, preventive health exams, mental health, adherence to treatment in medical conditions, vector control, and hygiene behaviour.

Keywords: *health behaviours, low and middle income countries, risk factors, physical inactivity, mental health*

Theory-based health behaviour intervention

PENGPID, S. (University of Limpopo)

Effective health promotion and health education, including public health, depends on the utilization of appropriate theory and practice strategies for a given problem and situation. Many interventions are meant to

bring about change in characteristic features of the person. An alternative approach is to focus interventions more on communication, decision-making skills, beliefs and knowledge. Interventions require advocacy and dissemination, particularly at context level i.e. policy makers, community leaders, and other government agencies. The presentation will cover the rationale of health intervention programmes and the strategy for the development and implementation of intervention programmes. The aim of this paper is to orient audiences about health behaviours, health behaviours intervention and theories related to health behaviour change. The paper serves as introductory part of the symposium, in order to provide background knowledge and emphasis on the health behaviours interventions. Based on a literature review, the speaker will provide information on understanding concepts of health behaviour and intervention strategies, theory and models, utilization of theories to develop effective health behaviour interventions. The presentation will cover following topics: 1) the utilization of theory to generate ideas in health behaviour intervention research and evaluation, 2) how to develop an effective intervention-oriented research, 3) models and theories in health behaviour research, 4) methods of theory testing and theory comparison in research, 5) strategy for the development and implementation of intervention programmes, 6) practical case study and models of effective of intervention research. The audience will be equipped with background information and principles of health behaviour interventions.

Keywords: health promotion, health education, public health, theory-based intervention, research

Health contexts for orphan girl children: The influence of school

MPOFU, E. (University of Sydney)

School is a context for child health from the life-skills students learn from schooling. Types of schools may influence the specific health-related messages that students are exposed to or perceive to receive. Church or faith-based schools may value faith informed concepts for health whereas secular schools may emphasize

life-skills education. The study investigated how female orphans perceive HIV messages from church-affiliated compared to secular secondary schools, and to explore the context in which they make sexual decisions. One hundred and eight Zimbabwean teenage orphans (mean age 13.7 months, $SD = 5$ months) attending five church-related schools ($n = 56$) and five secular schools ($n = 44$) participated in the study. The students generated statements in response to a focus group discussion probe on the messages they perceived to receive from church-related versus secular schools which they believed to influence their sexual decisions. Data were analysed using concept systems, a mixed method approach that allows for statement aggregation into thematic units representing core meanings from brain-stormed focus group statements. Students from church-related schools perceived to receive from their school faith-based reasons for abstaining from sex or delaying sexual debut. Students from church related schools also mentioned the importance of personal goals (such as school achievement) as a primary message for health from their schools. Students from secular schools tended to report an emphasis by their schools on life skills education and the importance of reducing the burden of care to parents or guardians by not acquiring an unwanted pregnancy or contracting HIV. Fear of the social consequences of early and unwanted pregnancy was perceived by the teenage orphan girls in both church-related and secular schools to be a significant deterrent to sexual debut. Teenage orphan girl children perceive the school context to influence their decisions about sex. Developmentally appropriate concerns about the need to invest in education and to avoid early, unwanted pregnancy an important prism through which teenage orphan girls appropriate sexual health education messages.

Keywords: secular schools, female orphans, HIV, church-affiliated schools, students

Lay counsellor-based risk reduction intervention with HIV positive diagnosed patients at public HIV counselling and testing sites in Mpumalanga, South Africa

PELTZER, K. (HSRC)

To evaluate the feasibility, fidelity, and effectiveness of a human immunodeficiency virus (HIV) prevention intervention delivered to HIV-infected patients by lay counsellors during routine HIV Counselling and Testing (HCT) public service in Mpumalanga, South Africa. A total of 488 HIV-infected patients, aged 18 years and older, receiving HCT service at clinics in Mpumalanga, received an "Options for Health" intervention delivered by clinic lay counsellors. Intervention lay counsellors implemented a brief risk reduction intervention at on average 2.3 sessions to help patients reduce their unprotected sexual behaviour. Questionnaires were administered at baseline and 4 months following the intervention to assess HIV risk behaviour in previous 3 months. A significant increase in AIDS knowledge, behavioural intentions and risk reduction efficacy among participants at follow-up has been shown. Participants at 4-months follow-up reported a significant reduction of multiple partners, unprotected sex, alcohol or drug use in a sexual context, and transactional sex. In addition, sexual abstinence increased and alcohol use decreased, in the past 3 months. A lay counsellor-delivered HIV prevention intervention targeting HIV-infected patients seems to be feasible to implement with fidelity in the South African HCT setting and effective at reducing risk behaviour.

Keywords: lay counsellor, risk reduction, HIV, interventions, South Africa

History of applied psychology: national trends and developments

Chair(s): CARPINTERO, H. (Open University of Madrid (UDIMA))

Discussant(s): PRIETO, J. M. (Complutense University Of Madrid)

Applied psychology offers a great variety of approaches and problems, which are largely due to the demands from societies that promote its development. The symposium offers several views regarding the development of psychological intervention in Spanish and Latin American societies in the 20th century. The relevance of psychology has been based on the utility of psychological techniques for solving social conflicts. The contributions are focused on the study of special areas, problems and instruments.

Development of fiscal consciousness among Spanish women (1975-2009)

QUIÑONES-VIDAL, E. (University of Murcia),
ALARCON-GARCIA, G. (University of Murcia),
PEÑARANDA, M. (University of Murcia)

Since the advent of democracy, significant changes have taken place on tax compliance among women in contemporary Spain. Under the new regime, the tax system was adapted to the interests of a social oriented democracy, promoting equality of opportunities, and equality between genders. An empirical analysis of fiscal data, based on information from the Institute for Tax Policy Studies in the 1975-2009 period, has been carried out. Attitudes toward the Treasury, and ethical components of fiscal consciousness were considered. Significant changes have been detected, and have also been tentatively differentiated. Moral sense and beliefs and the various types of attitudes toward tax control are described. Their correlation with other relevant social variables, such as social status,

age, and level of education have been taken into account. In conclusion, significant changes seem to have appeared, connecting fiscal consciousness to both level of age and cultural level. The democratic framework of contemporary society seems to be on the ground for these type of social phenomena, that are largely dependent of public information and historical variables.

Keywords: *tax compliance, Spain, democracy, fiscal consciousness*

Work and organizational psychology in contemporary Spain

PRIETO-ZAMORA, J. M. (Complutense University Of Madrid)

Summarizing the main findings in the history of Work Psychology in Spain is the main focus of this paper. A 500-page book was published in 2009. It required the collaboration of scholars and practitioners (many of them already retired) to reconstruct, in a systematic manner, what was built for a century in this country. Analysis of archives, interviews with colleagues in each of the main regions in the country, a follow up of data in psychological journals and magazines in the human resources field, analysis of CVs of pioneers in universities and institutes of Psychology, have been the basis for generating an overview that ends in 1975, the end of Franco's regime and starts when the second International Congress of Psychotechnology (now ICAP), was held in Barcelona in 1921. Among its main results, the following ones are considered. One section analyzed the leading figures' contributions in either books or articles. Another section summarized the main findings by regions where practice was carried out both by public and private organizations. The third section explored new challenges and advanced developments in the field. The work and organizational field is the first area of expertise within Spanish Psychology that has generated a thorough study, both quantitative and qualitative, of what was done by pioneers in the field. 6.000 copies have been distributed to members of the Spanish Psychological Association and the Spanish Association of Personnel Directors. As a result, I/O students and graduates know who was who in the field

up to 1975. The picture strongly reinforces the professional identity of the practitioners as well as the academicians working in that field.

Keywords: *work psychology, Spain, organizational psychology, Spanish Psychological Association*

Historical studies on applied psychology through the Revista de Historia de la Psicología (Journal of History of Psychology, Spain) 1980-2009

MESTRE, V. (University of Valencia), TUR, A. (University of Valencia), SAMPER, P. (University of Valencia)

The Journal of History of Psychology (Revista de Historia de la Psicología), founded in 1980 at the University of Valencia (Spain), is now the oldest living journal in the field of psychology history within Spain, and one of the few publications in this field all over the world. It publishes articles both in Spanish and English, and is currently one of the main sources of historical information in psychology. The contents of the journal have been analyzed, in order to determine the topics and authors that have contributed to the knowledge of the history of applied psychology. A bibliographical and bibliometric methodology has been applied in this research, in order to determine the amount of articles published in its whole collection, related to applied psychology topics and working groups. An effort has been made to categorize the papers that were found, and a detailed study was also carried out on the main working groups, leading authors and dominant topics and questions present in its pages. Although the journal puts a special emphasis on Spanish psychology, there are several significant papers dealing with applied topics, as the result of the application of a bibliometric methodology to analyze some specialized journals that discuss applied topics - Sport psychology, traffic safety, and so on. The journal appears as an effective and significant source of historical information for the mentioned areas. The variety and soundness of most of the contributions reveal the intellectual value of the publication for all those interested in historical research in psychology.

Keywords: *History of Psychology, Spain, bibliometric methodology*

History of applied psychology in Argentina: Changes and variations related to the social and political development in the country

ROSSI, L. A. (University of Buenos Aires)

History of applied psychology in Argentina has to be viewed in the light of the country's history. The political changes and disruptions and the social changes experienced by the Argentinian society have deeply influenced the evolution of its applied psychology, which is strongly connected with the needs and aspirations of that society. The country history has been organized according to certain periods, through which the main advances and achievements in the field are interpreted in this paper. We begin with the consideration of the Conservative political period of the Argentinian contemporary history (1900-1916), in which clinical and criminal psychology significantly developed, a process largely due to the needs and purpose of getting strong social control and regulation of the great European immigration. In the 20's, social labor appliances by means of various Institutes paralleled the social and economic inclusion of immigrants, according to an active political participation. A new conservative period (1930-1946) with restricted participation and significant inner migration from the rural world to the industrial areas at the urban centers, shows not only the abrupt disappearance of Labor Institutes but also the rise of criminal psychiatry and the growth of clinical psychology. During the open air period lived by the country between 1948 and 1955 an open political period paved the way to the large development of an educational and psychotechnic psychology tradition. All applied psychology traditions flourished and allowed the foundation of university professional careers of Psychology in the whole country, that took place the following years. A close analysis of the historical changes and the intellectual developments in the field of psychological intervention shows the validity of the hypothesis that maintains the existence of a close relationship that links the psychological world to social movements in modern

countries. Argentinian history is a clear example of the close interrelationship between the psychological world and the social and political development in a society. The various periods of that history throw significant light on the evolution of this special psychological field.

Keywords: *applied psychology, Argentina, social development, political development*

A landmark work in Latin American applied psychology: Bela Szakely's "Los Tests"

CARPINTERO, H. (Open University of Madrid (UDIMA)), DEL BARRIO, V. (Open University of Spain (UNED)), GONZALEZ, M. J. (Open University of Spain (UNED))

Bela Szekely (1892-1955,) a Hungarian-born psychologist, who emigrated to Latin America in the days of the Second World War, and had a large influence since he settled down in Buenos Aires in the late 30's, published an important collection of tests for the use of teachers and professionals, which have been useful as a reference book for psychologists and students for many years, and have contributed to the popularization of psychology in the Spanish speaking world. Three consecutive editions of the book (1946, 1948, and 1966) have been published. New instruments and tests have been included in each version, and its history reveals the story of the growing needs and the changing demands of technical information and means experienced by the professionals of psychology in these countries. Bibliographical and bibliometric approaches provide us with a detailed picture of the changes and improvements that have been taken place in the book along the years. The three editions are compared, and the changes found are analyzed in order to determine the theoretical movements and the professional demands that could explain them. Significant variations have taken place in the successive editions of the book. While the first one largely relied on intelligence evaluation and assessment, the second one added an important section on personality assessment, that needed a two-volume edition, which means to increase nearly 30% of pages to the previous one. The

third edition appeared in a posthumous manner, under the care of A. Calcagno, and opened its pages to the collaboration of significant names in the Spanish speaking psychology, who found in this book a well-known instrument to spread their knowledge in a time when the psychologist career in most of those countries was beginning. The book appears as a useful and largely employed instrument in Latin American applied psychology. Changes in its content may be taken as indicators for detecting some changes and trends in that field.

Keywords: *Latin American, Bela Szekely, Buenos Aires, personality assessment, applied psychology*

Identity construction in the working lives of older women: International perspectives

Chair(s): WATSON, M. (Nelson Mandela Metropolitan University)

Discussant(s): BIMROSE, J. (Institute for Employment Research, University of Warwick)

The working lives of older women are constructed over time through a complex interaction of many systemic factors such as their context, culture, life-stage, perceived support and personality. These factors can negatively influence the identity construction of older women resulting in social and economic consequences such as higher levels of welfare dependency, low self-esteem and disengagement from the community. The working lives of older women are complex and their career development is embedded in discriminatory practices across labour markets around the world which militate against the optimal use of their skills and talents. Further compounding the career development of older women is that ageism and sexism are two universally persistent features of labour market disadvantage. Thus the situation of older women in the labour market differs considerably from that of their male counterparts in that their working lives are more likely to be affected by parenting responsibilities, broken employment patterns, part-time employment and inequality in the workforce. Such social equity issues are not country specific, with gender inequality featuring in labour markets of developed and developing countries. The consequence is that women continue to be marginalized, despite the general recognition that economic prosperity within nations requires the full and equal integration of women into all levels and occupational sectors of labour forces. The present symposium explores the working lives of older women across four nations as research to date has largely focused on women of child bearing age. Thus less is known about the working lives of older women. The key learning objectives of this symposium are to: a) develop

an understanding of older women's career development in diverse countries; b) identify global and local narratives of older women, c) develop an understanding of research methodologies appropriate to investigating older women's careers, d) consider issues and challenges facing research into older women's career development.

Combating occupational segregation: the role for careers guidance and counselling

BIMROSE, J. (Institute for Employment Research, University of Warwick)

To examine how older women workers in England (45 to 65), have moved through different employment and learning contexts. A qualitative, case study approach was used for this small scale country study, since it encourages multiple methods of investigation and recognises the importance of both context and social structure. In so doing, it combines elements of the psychological and social scientific approaches essential for investigating the career development of older women. Purposive sampling enabled the identification of participants from on-line questionnaires completed by a large (c 1,100) European sample of mid-career workers (2009) who had indicated their willingness to be interviewed. Data collected during in-depth telephone interviews supplemented the questionnaire data to provide rich and deep insights on the learning and career trajectories of older women. The strategic biographies of a small sample of women were constructed as they responded to the challenges of balancing the demands of formal employment whilst continuing to develop their work-related learning, careers and identities. Discrimination emerged as crucial in both shaping career progression and also influencing personal and professional identities. A complex interaction of a number of variables in the development of older women's learning and career trajectories became evident as data analysis progressed. The focus of this paper relates to data collected on workplace discrimination, which emerged as an important factor. This was barely recognised by some participants and its formative influence marginalised by others. Yet its impact in structuring opportunities and

aspirations is evident. Particularly striking is the way in which experiences of discrimination in the workplace tend to be systematically normalised by victims and how a range of strategies for coping are deployed. Embedded in these responses was the taken-for-granted assumption that this is how things are and simply have to be tolerated. Gender discrimination continues to act as a barrier to women's learning and career progression. Access to formal career guidance and counselling support is rare. Where informal networks were under-developed, individuals struggled to progress. This poses a set of challenges for the professional practice of careers guidance and counselling.

Keywords: women's underrepresentation, England, employment, occupational segregation, vocational guidance

Socially embedded career identities: A voice-centred analysis of the career narratives of ten Black South African women

FRIZELLE, K. (University of KwaZulu-Natal)

Career theories, particularly in the post-modern context, have increasingly been challenged for their implicit (Western) assumption that autonomous individuals make internally driven career decisions. A recent article by Duffy and Dik (2009) highlight a number of sources 'beyond the self' that influence career development. While promising, this research continues in the realist tradition by reducing 'external sources' to variables that influence a pre-existing individual. This paper aims to challenge this view that reinforces the individual-social/agency-determinism dichotomy in relation to career development. The paper argues that there is a dialectical relationship between the individual and society. Rather than simply influencing the career choices of an individual social factors help create the socially embedded individual who is constantly negotiating her subjectivity and career identity within particular (and sometimes multiple) socio-political and cultural contexts. Career research needs to start asking research questions that are framed by an understanding of individuals as socially-embedded. This study

is informed by the theory of hermeneutics, which acknowledges the historical and social contexts that shape individuals' interpretations of their lives. Narrative interviews were used to collect the career development stories of ten Black South African women and the voice-centred method of analysis, based on the principal of relational ontology, was used to analyse the narratives. The analysis powerfully demonstrates the social embeddedness of the women's career narratives. The study illustrates that the women's process of career development cannot be separated from the process through which they negotiated complex webs of interpersonal relationships and cultural scripts within a particular socio-political context. The analysis, for example, illustrates how the women's career narratives are informed by wider apartheid legislation and, therefore, identity constructs such as race and gender. Cultural scripts around connectedness and personhood were also found to be integral to the career development of these women. Social factors cannot be seen as 'beyond the self', but should rather be seen as inextricable from the ongoing process of identity formation and, therefore, career development.

Keywords: *career development, external sources, society, individual, career identity*

Older Australian women's careers: Learning from significant transitions

MCMAHON, M. (The University of Queensland)

Older women's career trajectories are more likely than those of men to include late entry to the workforce, interrupted workforce participation or substantial part-time employment. Older women therefore are likely to have experienced many learning and work transitions. The aim of the study was to examine how Australian women cope with learning and work transitions and adapt to the new situations brought about by such transitions. Data was collected by semi-structured interviews. Participants were recruited by career counsellors who made project information supplied by the researcher available to women in the 45 to 65 year age group. Women interested in participating in the project contacted the researcher. The

focus of the present paper is on the most significant work or learning transition experienced by participants. The interview included questions related to the process of the significant transition, emotions experienced during the transition period, issues faced (e.g., finance, family commitments), support accessed, strategies employed, and advice to others. Data analysis was conducted using a grounded theory approach. All of the participants had experienced numerous learning and work transitions during the course of their careers and all were able to identify their most significant transition. Findings confirmed the relational nature of the women's careers and provided insight into strategies employed by the participants in adapting to transition. A lack of professional support accessed by the women was evident as was their resourcefulness in adapting to transition. The need to consider both the subjective and objective experience of career transition is evident in the findings. Further, the findings suggest that providing opportunities for women to tell holistic career stories may be a useful strategy for career development practitioners. The challenge of encouraging women to access professional support is considered.

Keywords: *older people, work transitions, support, coping strategies, career development*

Work and older women: Perspectives from India

VINDHYA, U. (Centre for Economic and Social Studies), WATSON, M. (Nelson Mandela Metropolitan University)

An overwhelming predominance of informal (largely home-based) over formal workforce participation, the constraints of women's reproductive roles and responsibilities, and cultural sanctions on work outside the home characterize the women's work scenario in India. The aim of this paper is to provide an overview of the literature on the working lives of older women in India. The paper is based on a decadal (1999-2009) review of literature published from India in English on issues of older women workers. The dominant disciplinary prisms through which the nature of

women's paid work force participation is analyzed are largely through labour economics and sociology. Demographers have noted that feminization of the aging population is an important emerging trend in India but the literature on working lives of older women in particular is scanty. The greater representation of women in the informal sector means that older women who have never worked in the formal sector are not likely to start working later in life; and that women in home-based occupations continue to work throughout the life course. However, work related issues including the impact of work on women's autonomy and identity, and the nature and consequences of work life balance for older women have not received much attention. The field of psychology has largely concentrated on the challenges and health consequences of aging; the psychosocial situation of older women and comparisons with men in similar age cohorts; and implications of elder care policies. Literature indicates the interplay of multiple social hierarchies -- of gender and generation -- with older women seen as wielding considerable power in the household and on younger women's work-life choices. The popular belief about declining family support due to urbanization is not supported, implying that care giving responsibilities of women continue beyond the reproductive age. Studies on psychological well being of older women show that continuation of care work functions provide some kind of a buffer against mental health problems like depression. The implications of the literature review are discussed in the context of national frameworks and policies related to older women workers.

Keywords: *gender roles, feminization, urbanization, psychological well-being, India*

Career and learning transitions of older Xhosa-speaking women in academia

WATSON, M. (Nelson Mandela Metropolitan University)

There are historical, social and gender barriers to the career development of South African women which have resulted in discrimination, prejudice and inequalities in the work place. Thus, while women represent over half of

South Africa's adult population, they only represent 15% of all executive management positions. Despite employment equity legislation, Naidoo and May (2006) are of the opinion that a decade later there has been little improvement in the working conditions and career prospects for South African women. The present study explores how Xhosa-speaking women between the ages of 45 and 65 years cope with work and learning transitions within a tertiary academic institution. The research was conducted within a qualitative, multiple case study approach. The sample consisted of 6 Xhosa-speaking women employed in academic and non-academic (administrative) positions at a South African tertiary institution. The women participated in a semi-structured, taped interview of approximately one hour duration. The interview structure was co-developed internationally and provided women with the opportunity to explore work and learning transitions both in terms of their past, present and future, as well as the systemic influences on such transitions. The taped interviews were transcribed, validated by the participants, and the content themed. Several themes were generic across the participants and the various positions in which they were employed. These themes demonstrated the influence of cultural beliefs about women working and the significant influence of both nuclear and extended family members. Regardless of the level of employment and learning attained, all participants had experienced considerable barriers in terms of interpersonal and financial support, as well as the negative impact of disadvantaged historical, social, political and educational influences on their development. The marginalised status that emerged from the narratives of all the older women in relation to work and learning transitions they have made challenges more conventional and westernised conceptions of women's career development. As such, these narratives endorse the need for career counsellors to consider more qualitative approaches in their career practice.

Keywords: *South Africa, older people, academia, transition, discrimination*

Illustrating the need for substantive methodological synergies in educational and psychological research

Chair(s): MORIN, A. J. S. (University of Sherbrooke), MARSH, H. W. (Oxford University)

Discussant(s): KHOO, S. T. (Australian Council for Educational Research, The Psychometrics Institute)

Marsh and Hau (2007) and Borsboom (2006) emphasized the need for substantive-methodological synergies (SMS) in psychological research. SMS represent joint ventures in which new methodological developments are applied to substantively important issues. Marsh and Hau (2007) argue that SMS offer a unique, creative, and more precise way of analyzing psychological phenomenon. Borsboom (2006) underlined the widening gap between methodological refinements and applied research and proposed SMS as a way for psychometricians/statisticians to play a more direct role in psychological investigations. Given the widening gap between methodological refinements and the quantitative repertoire of applied researchers, both papers have yet to exert a determining influence on applied research. Indeed, applied researchers often lack the (a) mathematical training required to access these development and/or (b) the time to sort through methodological journals given the pressure they are under to publish in their substantive area. Clearly, substantive methodological-synergies represent a way to (a) shed new light on substantively important questions; (b) bring methodological development in an “arena” were applied researchers will read them; (c) provide methodological experts with an opportunity for simpler presentations of methodological refinements. In the present symposium, the papers will demonstrate the importance and usefulness of harnessing the synergy between advanced methodology and meaningful substantive issues. Following a brief introduction, the first paper will present a

detailed review of methods developed to test for latent interactions and illustrate their importance for substantive research. In the second paper, the authors will present a further illustration of latent interactions methods but extend these methods to multilevel structural equation models (SEM) designed to study what motivates students from 57 countries worldwide to pursue science-related careers. Then, a third paper will illustrate the usefulness of three-level multilevel models in addressing substantively important ecological and transactional questions in educational research. The last paper will present results from a longitudinal study designed to evaluate the developmental stability/instability of anxiety development in adolescence relying on growth mixture models, while at the same time illustrating the biasing impact of model specification on the obtained results. Discussion will follow.

Estimating and testing latent interactions: Advancements in theories and practical applications

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Estimating the interaction between variables is an important theoretical, substantive, and empirical issue in psychology and many other social sciences. Despite this ongoing emphasis on interaction effects, empirical support for predicted interactions has been disappointingly limited. One reason might be that the independent variables are contaminated by measurement error and do not provide accurate estimates of true interaction effects. Particularly when there are multiple indicators of these variables, latent variable approaches provide a much stronger basis for evaluating the underlying factor structure relating multiple indicators to their factors, controlling for measurement error, increasing power, and, ultimately, providing more defensible interpretations of the interaction effects. Nevertheless, despite the widespread use of structural equation models (SEM) for the purposes of estimating relations among latent variables and the importance of interaction effects, there have been very few substantive applications of SEMs to estimating interactions

between two latent variables. This is due mainly to the complexity in the implementation of the estimation procedures in commercially available softwares. In this paper, we will review and compare various maximum likelihood (ML) approaches for estimating latent interaction effects in SEM (Marsh, Wen, & Hau, 2004, 2006) and illustrate their use in substantive research. These approaches include the unconstrained (Marsh et al., 2004), constrained (Algina & Moulder, 2001), and generalized appended product indicator (GAPI; Wall & Amemiya, 2001) approaches. Recent developments including the double-mean-centering strategy and the elimination of the mean structure totally by centering the latent interaction construct will also be discussed (Marsh, Wen, Hau, Little, Bovaird, & Widaman, 2007). Similar to the multiple regression models in which the typical standardization of interaction terms is not appropriate, analogous problem exists for SEMs. We will also demonstrate how appropriate standardized parameter estimates are easily formulated from parameter estimates routinely available from existing SEM software packages (Wen, Marsh, & Hau, 2010).

Keywords: latent variable, measurement, structural equation models, maximum likelihood approaches, standardized parameter estimates

“Who took the “X” out of expectancy-value theory?” - A cross-cultural analysis with PISA 2006

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Students' enrollments in sciences are declining worldwide. Previous research shows that self-concept, interest and achievement are reciprocally related and important predictors of coursework selection and career choice. Here we apply/extend Expectancy Value Theory (EVT). EVT posits that academic choice is a function of $E = \text{Expectations of Success (ASC=academic self-concept)}$, $V = \text{Value (ENJ = enjoyment)}$, and their interaction ($\text{ExV} = \text{ASC} \times \text{ENJ}$). The ExV interaction implies that students are most motivated when both E and V are high. However, this critical interaction has

been largely dropped as non-significant from applied EVT research. We argue that the failure of modern EVT research to find ExV interactions is largely due to methodological limitations. We posit that new multilevel structural equation models (M-SEM) with latent interactions will resolve the problem of the missing ExV interactions in EVT. This study will rely on the OECD-PISA-2006 database, allowing international comparisons of educational outcomes across 57 countries ($n = 400,000$ students). Measures from this database covering science-related independent (ASC-expectancy; ENJ-value; ASCxENJ; achievement-ACH] and dependent (career plans; activities) variables will be used. In the present study, M-SEM with latent interactions will be used to evaluate the presence of the ExV interaction in EVT. The results show, in the total sample, significant positive effects of ASC, ENJ and ASCxENJ on both science-related career plans and activities. Multiple-group models (57 countries) further show that ASCxENJ is statistically significant in the prediction of science-related career plans in 45/57 countries and in the prediction of science-related activities in 48/57 countries. In addition, the results show that ASCxENJ is substantially related to country level values of individualism. Consistent with early EVT but contrary to subsequent versions, the ExV interaction is statistically significant, highly reliable, and supports the need to reinstate the ExT interaction into EVT. The study addresses the critical issue of declining science enrolments, has profound implications for motivation theory, is based on cutting-edge, emerging methodology, uses the best available data, and fits well with our program of substantive-methodological synergy development. Each of these aspects will be more completely discussed in the context of the conference.

Keywords: Expectancy Value Theory, multilevel structural equation models, multiple-group models, motivation, educational outcomes

Integrating multilevel modeling and conceptual frameworks to shape further understanding of constructs in educational psychology

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Multilevel modeling provides a more appropriate mean of evaluating important educational issues than would be possible with typical single-level analyses that ignore the clustering of individuals within groups (Goldstein, 2003; Raudenbush & Bryk, 2002). It is evident, however, that there is substantial variation in the extent to which group differences exist on salient educational psychology constructs. Using multilevel modeling, the paper presents a conceptual framework developed by Martin (2009) drawing on the Ecological Systems Framework (Bronfenbrenner, 1979) and the Transactional Model (Sameroff, 2009) to progress current understanding of a diverse selection of educational psychology constructs that evince different amounts of variance at different structural levels. The sample comprises 4,383 Australian students (54% female, 46% male) from 250 classrooms in 47 schools across Grades 5 (22%), 6 (22%), 7 (28%), and 8 (28%). Students were administered scales encompassing mathematics motivation, engagement, and homework completion – as well as a brief mathematics test. Multilevel modeling was conducted using MLwiN with particular focus on variance explained at student, class, and schools levels on each of these factors, beginning with a variance components model through to a final conditional model with covariates. Consistent with hypotheses, results demonstrated different amounts of explained variance for different educational psychology constructs at different levels (student, class, school). For example, the bulk of variance (>90%) on ‘intra-psychic’ constructs (eg. motivation) was explained at the student level. On the other hand, constructs (e.g. homework completion, achievement) that are more embedded in or activated by environmental factors (e.g. teacher, school policy) evinced significant variance at student, class, and school levels. These effects were evident in variance components models and models controlling for variance attributable to gender, age, and ethnicity. Consistent with Martin (2009), the study demonstrates that through the

integration of substantive (ecological systems theory, transactional model) and methodological (multilevel modeling) considerations, a range of educational psychology constructs can be meaningfully profiled in terms of their relevance at student, class, and school levels. This substantive-methodological synergy holds vital implications for psycho-educational intervention through identifying appropriate levels for particular educational psychology constructs at which to direct practice and resources.

Keywords: multilevel modeling, ecological systems framework, variance components model, transactional model, educational psychology

Growth Mixture Modeling of adolescents trajectories of anxiety across adolescence: The impact of untested invariance assumptions on substantive interpretations

MORIN, A. J. S. (University of Sherbrooke), MAÏANO, C. (University of the Mediterranean Aix-Marseille II), MORIZOT, J. (University of Montreal), JANOSZ, M. (University of Montreal)

Since Nagin (1999) paper on latent class growth analyses (LCGA), the number of publications attempting to model developmental heterogeneity literally exploded. However, LCGA assume the absence of inter-individual variability within the extracted trajectories. Alternative methods, namely growth mixture models (GMM), were developed by Muthén & Shedden (1999) to address similar questions without this assumption and allowing most models parameters to vary across classes. Proponents of LCGA usually argue that their models are more parsimonious whereas proponents of GMM argued that their models are more realistic. Unfortunately, few empirically tested these assumptions and those who did generally found that assuming between-trajectory invariance of models parameters may result in biased estimates (Enders & Tofighi, 2008). In this study, we investigate the impact of model specifications on substantive conclusions. Substantively, this study addresses the issue of the developmental stability or instability of anxiety across adolescence. Indeed, the stable or transient

state of anxious symptoms across the high school year is an issue that has yet to be clarified, which might potentially be related to the presence of unobserved developmental heterogeneity. Data from the Montreal Adolescent Depression Development Project (MADDP), a four-year follow-up of over 1,000 adolescents who completed the Beck Anxiety Inventory each year will be used. The relative fit to the data of nested LCGA, class-invariant GMM and GMM with class-varying parameter will be empirically compared. However, the model with the optimal number of classes within each parameterization will also be interpreted. The final retained model will also be associated with predictors (related to school violence) and outcomes (related to academic success) to show its meaningfulness. LCGA yielded a five class solution showing the stability of anxious symptoms across adolescence. Class-invariant GMM suggested a four class solution characterized by developmental instability. Finally, GMM with class-varying parameters (which fitted the data better) produced a five-class solution showing both the stability of anxiety symptoms, and their instability at elevated levels. In addition to the substantive interpretation of these results, the discussion will also underscore the need to empirically verify invariance assumption in the context of LCGA/GMM studies.

Keywords: latent class growth analyses, growth mixture models, Beck Anxiety Inventory, adolescence, anxiety

Imagining the future: New developments in imagery in sport Part 1: Role and measurement of imagery ability in sport

Chair(s): MORRIS, T. (School of SES/ISEAL, Victoria University, Melbourne)

Discussant(s): SPITTLE, N. (Deakin University, Melbourne)

Imagery is a central pillar of psychological skills training (PST), a core component of sport psychologists' practice. Imagery can facilitate learning/practice of skills, developing/rehearsing strategies, previewing/ reviewing performance, managing psychological variables, and promoting recovery from injury/heavy training. Researchers have studied many aspects of imagery in sport. Practitioners have reported effective use of imagery in athletic contexts. Nonetheless, understanding how to apply imagery in sport is limited. One reason is that imagery cannot be observed directly; its operation is inferred from behavior or self-report. Also, because potential applications are diverse, few factors affecting imagery delivery have been rigorously examined. In this symposium, we present new developments on imagery in sport and movement, to enhance understanding of this ubiquitous technique. This is a two-part symposium. In Part 1, we focus on imagery ability. The foundation of the work on imagery presented in this symposium is that imagery is an effective technique that can benefit athletes. Thus, Paper 1 in the symposium reports on a new meta-analysis addressing the crucial issue of whether imagery works. The valid and reliable measurement of imagery ability is critical in research on imagery application to ensure that inferences derived from research outcomes are justified. Imagery ability is also crucial in practice because application of imagery must take into account athletes' capacity to imagine across modalities and dimensions. Early measures showed limited

ecological validity. Watt, Morris, and Andersen (2004) developed the Sport Imagery Ability Measure (SIAM). Study of a Thai-language version reported in Paper 2, reflects on the robustness of the SIAM, for use with Thai athletes. Further evidence on the cultural and linguistic transferability of the SIAM is presented in Paper 3, which examines construct validity of a Hebrew-language version. The relationship between imagery ability and key sport-related variables is examined in Paper 4, signaling use of the SIAM in applied contexts. Paper 5 reviews the importance of experimental techniques to measure motor imagery ability. This symposium shows that imagery is an effective technique in sport and that imagery ability can be measured in ecologically-valid ways using the SIAM and experimental paradigms.

What you see is what you get: A meta-analytic review of the effects of imagery in sport and exercise domains

CURRAN, M. L. (University of Southern Queensland), TERRY, P. C. (University of Southern Queensland)

Imagery is often proposed to be an effective way to enhance the physical performance of athletes and exercisers. A meta-analytic evaluation of the extant literature was conducted to provide an objective assessment of the veracity of that proposal. Previous meta-analyses in the area have reported significant benefits of imagery, although the most recent of these was conducted more than 15 years ago, since when much additional research has been conducted. Search procedures, which included a systematic trawl of 14 electronic databases and manual searches of 12 relevant journals, identified a total of 205 relevant articles for detailed review. Of these, 108 studies met the inclusion and exclusion criteria and were included in the meta-analysis. Overall, 291 effects from 4,220 participants were derived from the studies. Using a random effects model, weighted mean effects and moderating variables were assessed via the Comprehensive Meta-Analysis software. The overall weighted mean effect ($d = 0.53$) indicated that imagery is associated with significant benefits to performance in sport and exercise. This moderate beneficial effect is

similar to those reported in previous meta-analyses. Several moderating variables were identified. Males derive greater benefits from imagery ($d = 0.52$) than females ($d = 0.36$). Experienced participants derive greater benefits from imagery ($d = 0.52$) than novices ($d = 0.44$). Cognitive tasks, such as remembering complex routines, were enhanced more by imagery ($d = 0.98$) than strength tasks ($d = 0.36$) and motor tasks ($d = 0.46$). Imagery research published in Tier A journals reported larger effects ($d = 0.95$) than in Tier B journals ($d = 0.63$), Tier C journals ($d = 0.42$), and unpublished research ($d = 0.19$). The present findings have strengthened the evidence base for the use of imagery in sport and exercise domains. Used appropriately, imagery is typically associated with significant performance benefits. Given the larger effects reported in Tier A journals, where it may be assumed that tighter control of potential confounds has occurred, the true benefits of imagery may be greater than suggested by the overall effect found in the present meta-analysis.

Keywords: *imagery, physical performance, athletes, cognitive task, sport*

Confirmatory factor analysis of the Thai language version of the sport imagery ability measure

VONGJATURAPAT, N. (Faculty of Sports Science, Burapha University, Bangsaen)

We report on translation of the English-language Sport Imagery Ability Measure (SIAM) into Thai language (SIAM-T), internal consistency, test-retest reliability, confirmatory factor analysis, and construct validity of the SIAM-T. The SIAM was translated into Thai by two bilingual Thai sport psychologists, back-translated to English by two bilingual Thai sport psychologists naïve to the English SIAM, checked by one of the Australian authors of the SIAM, amended by the original translators, back-translated again by the two original back-translators, and approved by the Australian author. The SIAM involves imagination of individual-specific versions of four generic sport scenes, each for 60 seconds, followed immediately after imagery of each scene by ratings on 12 subscales, six sense modalities

(visual, auditory, olfactory, gustatory, kinesthetic, tactile), five dimensions (vividness, control, ease, speed, duration) and emotion. The SIAM-T was administered to 877 male ($n=406$) and female ($n=471$) Thai sports participants, mean age 26.31 years ($SD=9.83$) from 26 diverse sports and skill levels. Internal consistency for the 12 subscales varied between $\alpha=.86$ and $.92$. Three-week test-retest reliability ($n=50$) for the 12 subscales varied between, $r=.68$ and $.79$. CFA of subscale scores conducted using LISREL 8.72 supported the proposed model of imagery ability, consisting of three factors, visual sense and dimensions, discrete organ senses (auditory, olfactory, gustatory), and diffuse senses (tactile, kinesthetic, emotion), with Chi-Square/df ratio=2.8, CFI=0.97, GFI=0.91, AGFI=0.96, RMSEA=0.048. Construct validity was supported by comparison of skill level, with National-level athletes ($n=180$) reporting significantly higher levels of imagery ability than Local-level athletes ($n=124$) on all 12 subscales, which is consistent with research reporting greater imagery ability in more skilled performers. This study demonstrated that the SIAM-T is a sound Thai-language version of the original SIAM. The close similarity of findings for the SIAM-T to the original SIAM and Finnish, Swedish, and Hebrew versions suggests that the SIAM is a robust instrument, retaining its structure in a range of languages and cultures. Further research is needed to examine the sensitivity of the SIAM to imagery ability training and to examine the construct validity of the SIAM in different contexts.

Keywords: English-language Sport Imagery Ability Measure, internal consistency, test-retest reliability, confirmatory factor analysis, construct validity

Relationship between gender, sports level, and imagery ability: Further investigation of the construct validity of the Sport Imagery Ability Measure (SIAM)

GOLDZWEIG, G. (Academic College of Tel-Aviv-Jaffa, Tel-Aviv)

Imagery is used almost universally by athletes, coaches, and sport psychologists for a wide range of functions, including performance

enhancement, management of psychological variables, and coping with sport injuries. Recently, there has been recognition of the need for valid and reliable measures of imagery ability. Such measures are valuable for both research and clinical practice. Thus, valid measures of imagery ability and its modalities may guide practitioners in applying different imagery methods and scripts. The aim of this study was to further examine the construct validity of a sport-specific measure of imagery, the Sport Imagery Ability Measure (SIAM). The SIAM is a task-oriented, multimodal, multidimensional imagery ability measure. The SIAM requires imagery of four generic sport scenes. Imagery is rated on 12 subscales, using 100mm analogue scales. In the current study, we present a further investigation of the predictive and construct validity of the Hebrew language version of the SIAM. The SIAM was administered to 85 Israeli college students. Participants were divided into 3 groups: local level athletes, amateur athletes, and non-athletes. The 12 subscales of the SIAM discriminated almost perfectly between the local level athletes and the other two groups, $F(12,79)=2.12$, $p<0.024$. The differences were significant for all of the SIAM subscales except the tactile and kinesthetic scales. Differences between the amateur athletes and the non-athletes were not significant. A further investigation of the amateurs group revealed that the SIAM subscales differentiated between participants in this group according to their weekly level of aerobic exercise, $F(12,50)=2.99$, $p<0.003$. The differences were significant for all the scales except the auditory scale. The SIAM also differentiated between men and women, showing that men reported higher imagery than women, even after controlling for sports activity levels. The results support the construct and predictive validity of the SIAM as a tool that can identify imagery ability differences even for quite similar groups. Gender differences are discussed in terms of the higher accessibility that men have to sports activities in general, as well as to cultural differences between genders related to sport involvement and capability.

Keywords: gender, sport, imagery, construct validity, Sport Imagery Ability Measure

A comparison of sport imagery ability clusters in relation to imagery use

JAAKKOLA, T. (Dept of Sports Science, University of Jyväskylä)

This study analyzed imagery ability profiles based on the Sport Imagery Ability Measure (SIAM; Watt, Morris, & Andersen, 2004) and how these are related to imagery use of athletes. Additional aims were to explore the relationship of the profiles with participation level and sport type classification. It was predicted that high imagery ability athletes would report greater imagery use. Furthermore, because previous research has indicated different patterns of imagery use for sport participation levels and sport type classifications (e.g., Arvinen-Barrow et al., 2007; Watt, Spittle, Jaakkola, & Morris, 2008), we expected variations in imagery ability profiles. Participants were 484 individuals (280 male, 204 female; M age = 20.39, SD = 4.10), comprising 84 national, 210 state, 120 district, and 70 recreational level athletes from 54 sports. Participants completed a demographic information sheet, the SIAM, and the Sport Imagery Questionnaire (SIQ), and were classified according to competitive level (i.e., recreational, district, state, and international) and sport type (i.e., individual, co-active, interactive). We conducted K-Mean cluster analysis of the SIAM scores, and then used these profiles to compare differences in imagery use based on the SIQ, and sport participation level and sport type classification. Cluster analyses identified three imagery ability profiles: a “High ability profile”, a “Low ability profile”, and a “Mixed ability profile” (athletes high in generational attributes and low in the non-visual sensorial attributes). Significant differences were found between the cluster groups in imagery use. There was no significant difference for participation level categories, but we found a significant difference for the comparison based on sport type classification. Imagery ability profiles were identified that highlighted differences in imagery use patterns. The “High ability profile” athletes tended to use imagery more and play interactive sports. The “Mixed ability profile” athletes tended to use imagery more than the “Low ability profile”, and participate in

individual sports. The “Low ability profile” athletes tended to use imagery less and participate in coactive sports. The results revealed that imagery ability profile may influence imagery use patterns and may be related to sports participation.

Keywords: Sport Imagery Ability Measure, athletes, imagery, sport, participation

The development of motor imagery in children

WILLIAMS, J. (School of SES/ISEAL, Victoria University, Melbourne)

In this paper we explain the importance of experimental paradigms for measuring motor imagery in children, review research on the link between poor motor imagery and motor skill deficits, and consider the importance of age-related findings on motor imagery ability in children. Experimental motor imagery paradigms are believed to allow us to gain an understanding of an individual’s ability to represent movements internally (Jeannerod, 2001). This is an important component of movement planning, allowing us to accurately predict the outcome of a given movement and thereby providing the foundation to select the most appropriate action to achieve a particular goal. These paradigms, widely-used with adult populations, are increasingly being used to explore the development of motor imagery in children (Caeyenberghs, Tsoupas, Wilson, & Smits-Engelsman, 2009; Caeyenberghs, Wilson, Van Roon, Swinnen, & Smits-Engelsman, 2009). They have also been used to link motor skill deficits in children with possible motor imagery deficits, with the argument being that poor motor imagery ability may be one cause of poor motor skills (Williams, Thomas, Maruff, & Wilson, 2008; Wilson et al., 2004). We will review this research here, beginning with a description of the paradigms used. We will then discuss the typical response patterns observed in adult groups and how children perform in comparison, including age-related findings and those relating to children with motor skill impairment. We will also discuss motor imagery training and its application to younger groups (Wilson, Thomas, & Maruff, 2002). The review will also consider the difficulties associated with the use of these

paradigms in children, such as compliance with task instructions, and how research can be improved to overcome such difficulties. The experimental measurement of motor imagery ability in children is an important step toward the goal of treating children with motor impairments. The objective of this presentation is to inform researchers and practitioners about the potential of this approach to help us understand the development and functioning of motor imagery in children, leading to new methods for treating motor impairment

Keywords: *motor imagery, children, motor skill deficits, age, training*

Imagining the future: New developments in imagery in sport Part 2: Issues in the delivery of imagery training in sport

Chair(s): SPITTLE, M. (School of Exercise and Nutrition Sciences, Deakin University)

Imagery is a central pillar of psychological skills training (PST), a core component of sport psychologists' practice. Imagery has many functions, including facilitating the learning/practice of skills, developing/rehearsing strategies, previewing/ reviewing performance, managing psychological variables, and promoting recovery from injury/heavy training. Despite substantial research and practice, understanding how to apply imagery optimally in sport is limited, because imagery cannot be observed directly, so its operation is inferred from behavior or self-report. Also, potential applications of imagery are diverse, so few factors affecting imagery delivery have been rigorously examined. In this symposium, we present new directions in research on imagery in sport, to enhance understanding of this ubiquitous technique. This is a two-part symposium. In Part 2, we focus on issues related to imagery delivery. Given the diversity, yet fragmented nature, of imagery research in sport, there is potential for a model providing guidance on issues to consider in developing imagery programs. Paper 1 examines a generic Imagery Training Program (ITP) Model and research that should be undertaken to test the ITP model. Paper 2 presents a qualitative exploration of the development and use of an ITP by elite-level golfers. In practice, imagery is widely used with open-skill tasks, but research has not examined whether athletes can imagine unpredictable events in sport. Paper 3 reports a study that used Hicks Law to address this question. Mahoney and Avener (1977) distinguished between internal (actor's view) and external (observer's views) imagery perspectives. There has been little consideration in sport of how

imagery perspectives develop. Morris and Spittle (2001) proposed a default hypothesis of imagery perspective development. In Paper 4, we present the default hypothesis and propose research directions to examine it. To understand the impact of internal and external imagery, in Paper 5, these perspectives were studied for the observation and imitation of movements presented from internal and external views, thus, varying stimulus-response compatibility. Key objectives of this symposium focus on the search for understanding of key processes in imagery delivery, which should stimulate research on important questions to enhance imagery use in sport.

Developing imagery interventions in sport: The Imagery Training Program Model

WATT, A. (School of Education/ISEAL, Victoria University, Melbourne), MORRIS, T. (School of SES/ISEAL Victoria University), SPITTLE, M. (School of Exercise and Nutrition Sciences, Deakin University)

We present a generic model developed to help practitioners consider appropriate variables when they design imagery training programs (ITP) for athletes. We suggest research to test the ITP model. Athletes, coaches, and psychologists employ imagery widely. Many theories have been proposed, but none has unequivocal support. Researchers have studied numerous variables related to imagery effectiveness, producing a mass of largely uncoordinated information of varying use to practitioners using imagery with athletes. Morris, Spittle, and Watt (2005) proposed an Imagery Training Program Model to guide the development of imagery programs. Because of the diversity of specific research, the ITP Model is generic, directing practitioners to examine the latest research on variables categorized under six components. Prerequisites are preexisting personal factors and the Environmental component represents aspects of the context to consider. Those components influence Content, which refers to the material in the program; Rehearsal Routines, which covers when and how imagery is practiced; and enhancements, which relates to imagery facilitators, such as video modeling or biofeedback. The final component, Evaluation,

can take many forms and should start soon after athletes begin working with the ITP their psychologist develops with them. The ITP model visually depicts relationships between the preexisting components, the structural components, and evaluation. The ITP model was developed during extensive review of research on imagery in sport, but has not been tested. Exploratory research should explore experiences of ITP developers and users. We report such a study in golf in this symposium. Research on the ITP model's utility in imagery program design, should test predictions concerning relationships between specific components. To do this, particular variables must be used as exemplars of components, but emphasis is on the components, not the exemplar variables. We illustrate this kind of research. The ITP model has potential to facilitate imagery program development and enhance imagery effectiveness. Our objectives are to stimulate researchers to test the ITP model and practitioners to apply it in ITP development, leading to refinements of components and the development of new elements.

Keywords: *imagery, sport, imagery, athletes, imagery*

A qualitative analysis of golfers' imagery use and imagery abilities

KOKKONEN, J. (Dept of Sports Science, University of Jyväskylä), WATT, A. (Victoria University, Melbourne)

The primary goal of this study was to examine the verbal descriptions of elite golfers' evaluation of their imagery use and their ability to generate and manipulate sport-related imagery. A secondary aim was to use the qualitative data to construct personalized imagery scripts to be used within a short Imagery Training Program (ITP) (Morris, Spittle, & Watt, 2005). Participants were three elite level Finnish golfers. The sample comprised one male and female from the European professional ranks, and one male ranked in the top-twenty Finnish amateurs. Players completed the Sport Imagery Ability Measure (SIAM) and Sport Imagery Questionnaire (SIQ) as a preliminary assessment of their imagery skills. Structured interviews were undertaken

individually over a one-hour period. The framework for the interview schedule was aligned with the qualitative studies of Moran and McIntyre (2007), in which the sport imagery use descriptions of Olympic level slalom canoeists were analyzed. Thirteen questions focused on the players use of imagery in relation to the development and performance of physical skills and in their use of imagery for psychological preparation, six questions referred to the generation and manipulation of images, three items addressed general information concerning imagery, and three questions sought specific information about the performance areas the player would like to address within an ITP. The imagery scripts were developed in consultation with each player and involved 20 5- to 10-minute sessions, completed over four weeks at times convenient to each player. Interview data was examined using content analysis that targeted the identification of text segments related to the why, what, and when themes of sport imagery. Results indicated the players used imagery more for the development of physical skills within training regimens than for psychological preparation in competition. They were also capable of providing specific imagery goals for the scripts and reported that the process of working with the researcher to develop content facilitated engagement in the ITP. Imagery appears to be a psychological technique for performance preparation that the small sample of golfers understood and were able to incorporate within their training and playing routines.

Keywords: *golfers, imagery, imagery, sport, performance*

Imagining unpredictable stimuli: Implications for the applied use of imagery

MCNEIL, D. (Ballarat University, Victoria), SPITTLE, M. (Deakin University, Melbourne), MORRIS, T. (Victoria University, Melbourne), EVANS, S. (University of Ballarat), MESAGNO, C. (University of Ballarat)

In applied settings, such as sport, imagery is often used to practice tasks with unpredictable stimuli, such as the actions of other players or the movement of the ball. However, one

question that remains unanswered is whether it is possible to imagine reacting to unpredictable stimuli. The aim of the study, thus, was to investigate whether performers can effectively imagine an unpredictable stimulus. This study examined differences on a reaction time (RT) task in visual and imagery conditions using Hick's Law as a framework. Essentially, Hick's Law suggests that RT will increase as a task becomes more unpredictable. Based on this, it was hypothesized that the imagery and visual conditions would be functionally equivalent. That is RT in each condition would increase as the number of response choices increased, in accordance with Hick's Law. 50 (25 female, 25 male) participants (M age = 21.76 years, SD = 1.64) completed 20 trials of a simple, 2-choice RT, and 4-choice RT task in both a visual and an imagery condition. In the visual condition participants responded to a visual stimulus displayed on a screen and in the imagery condition participants were instructed to imagine the stimulus and respond. RT increased significantly with response choices in the visual condition ($F(2, 48) = 235.322, p < 0.001, \eta^2 = .91$), however, there was no significant change for the imagery condition ($F(2, 48) = 2.608, p > .001, \eta^2 = .10$). Simple RT for the imagery condition was significantly higher than for the visual condition ($t(49) = 7.40, p < 0.001, \eta^2 = .53$). RT conformed to Hick's Law for the visual condition, but not for the imagery condition. This suggested that participants in the imagery condition did not recreate unpredictability in their imagery. It did, however, appear that participants were imagining the task, since it was taking time to generate an image. One interpretation may be that imagery of the task was pre-planned, removing the unpredictability of the stimulus. This has applied implications, since it seems to be difficult to practice unpredictable elements of a task in imagery. This should be explored further.

Keywords: *sport, imagery, unpredictable stimuli, reaction time, visual conditions*

Is internal imagery the default perspective and why does this matter?

MORRIS, T. (School of SES/ISEAL, Victoria University, Melbourne), SPITTLE, M. (Deakin University)

We present the case for a default hypothesis of imagery perspective, considering research that illuminates this hypothesis and implications for the application of imagery in sport. Mahoney and Avenier (1977) proposed that athletes imagine from two perspectives. Internal imagery is experienced from the actor's perspective, so individuals experience all the senses as if they are in their body performing. External imagery is experienced from a range of perspectives outside the body, so, the visual experience is like watching oneself on video from any angle, even improbable positions. Many practitioners focused on the internal perspective, which Mahoney and Avenier favored. Further research has supported the internal perspective, the external perspective, found no difference between perspectives, or argued for use of both perspectives. To apply imagery perspectives effectively, we must understand how each functions in various sports contexts. One issue not widely considered is how imagery perspectives develop. Morris and Spittle (2001) proposed a default hypothesis of imagery perspectives, arguing that infants imagine from an internal perspective, consistent with the Piagetian egocentric view of early intellectual development. Morris and Spittle posited that the external imagery perspective develops on the basis of children's experience of perceiving themselves as others perceive them, for example, in mirrors or on film. Little research has been conducted in sport testing this default hypothesis, but several sources of evidence provide insight into the proposition. We discuss this evidence. Further, the default hypothesis leads to predictions about the use of imagery perspectives in children and adults. Research examining these predictions in sport could be fruitful for understanding how internal and external imagery perspectives develop and when they are likely to be most effective in sport contexts. We propose several research directions to enhance understanding of the development of imagery perspectives. Understanding how imagery perspectives develop will help practitioners to apply internal and external imagery more effectively in their work with athletes. The objective is to inform

and stimulate researchers and practitioners to systematically examine predictions of the default hypothesis of internal and external imagery perspectives.

Keywords: *imagery, sport, performance, internal perspective, Piagetian egocentric view*

Internal and external imagery perspectives and physical movement

THANIKKAL, S. (School of SES/ISEAL, Victoria University, Melbourne), MORRIS, T. (Victoria University, Melbourne)

The aim of the present study was to compare internal and external imagery processes and physical movement in response to visually-displayed finger movements, to test the viability of using this task to examine mirror neuron functioning, monitored by EEG, during internal and external imagery. We screened student volunteers for internal and external imagery use on the revised VMIQ II, including only the 22 participants who scored moderate to high on both imagery perspectives. We presented video clips from two views, namely internal (finger moved away from the observer), and external (finger moved toward the observer). The video clips showed an index finger moving from a white, triangular ready key to press one of four blue, rectangular response keys on a custom-built keyboard. We exhibited 8 video clips in random sequences, showing movement to each response key from an internal and an external view. Participants watched the video clips in three research conditions, namely movement, internal imagery, or external imagery, and responded as quickly as possible by moving or imagining moving to the response key in the video clip, depending on the condition. In each condition, there were 10 practice trials and 40 test trials. We recorded decision and movement times for physical movement and overall response time for internal and external imagery conditions. For physical movement, decision time, $t=13.51$, $p<1$, and movement time, $t=4.83$, $p<1$, were significantly faster for the highly compatible internal view. Response times for physical movement were significantly faster than for both imagery conditions, $F=58.58$, $p<.001$, $\eta^2=.85$. There was a significant ordinal interaction for the imagery conditions and

views, $F=34.56$, $p<.001$, $\eta^2=.78$. The highly compatible internal view was faster for internal imagery, whereas the highly compatible external view was faster for external imagery. The significant compatibility effect for physical movement was predicted. Identification of opposite compatibility effects for internal and external imagery indicates that the task distinguished between internal and external imagery processes. These results suggest this task has potential for examining mirror neuron activity (inferred from EEG Mu rhythms) associated with observing, physically imitating, and imagining movements.

Keywords: internal perspective, external perspective, imagery, physical movement, neuron functioning

Implications of the international classification of functioning, disability and health on rehabilitation science and services

Chair(s): OAKLAND, T. (University of Florida)

A primary goal of rehabilitative service is to either improve or maintain functioning or, at the very least, decrease its rate of deterioration. The success to which service goals are achieved may require an understanding of an individual's functioning in multiple functional life situations (e.g. in one's home, work, school, and other community settings). Rehabilitation and health assessment data are needed to address three broad issues: whether an individual is benefiting from care, whether the science and practice of rehabilitation and health care services are improving, and whether we can identify the conditions that lead to more effective and efficient services. This symposium discusses the World Health Organization's (WHO) International Classification of Functioning, Disability and Health (ICF) as a framework for understanding rehabilitation and health assessment. The influences of context, process, and technology on assessment priorities, methods, and outcomes also are considered. Key learning objectives are to promote an understanding of: (1) the ICF model and its important implications for rehabilitation services; (2) major contributions of ecological models to assessment of environmental facilitators and barriers; (3) differences between environmental features and personal attributes; (4) the interactive effects of capacity and environmental attributes on performance outcomes; (5) the importance of measuring demand-producing environmental attributes in using environmental interventions to enhance rehabilitative methods; (6) differentiating quantitative and qualitative approaches to neuropsychological assessment and understand the pros and cons of each; (7) factors that may influence test performance and/or alter the

basic interpretation of test data; (8) the ICF's applications to neuropsychological assessments in rehabilitation and health settings; (9) the impact of culture in critical areas of neuropsychological assessment; and (10) the underlying importance of values in the provision of rehabilitation services.

International Classification of Functioning (ICF): Its review and general implications for rehabilitation services

OAKLAND, T. (University of Florida)

This paper introduces essential features of the International Classification of Functioning (ICF) and outlines ways the ICF can be useful to the promotion of the science and practice of rehabilitation and health care services, including care for patients receiving rehabilitation services. The World Health Organization's (WHO) ICF provides a framework for viewing behaviors from three broad and different perspectives: physiologic, physical, and psychological functions; the extent to which persons engage in functional life activities; and their participation in social settings. The ICF does not emphasize pathology or lead to a diagnosis. However, the ICF can be used as a companion to the WHO's International Statistical Classification of Diseases and Related Health Problems, Tenth Edition (ICD-10; WHO, 1992) when diagnosing disorders. The ICD-10 provides a system for classifying and diagnosing health conditions, including diseases, disorders, and injuries based on etiology. In contrast, the ICF emphasizes a client's full and accurate description, not diagnosis, based on medical and social models of disability through biological, individual, and social perspectives of health. When a diagnosis is needed to obtain benefits, the ICD-10 may be used to classify a client's disability. The combined use of the ICF and ICD-10 provides for more comprehensive descriptions and is useful for program planning and intervention services. The ICF places considerable emphasis on identifying functional impairments and thus strongly emphasizes the importance of adaptive behavior. Specifically, its activities and participation components address the execution of a task or action by an individual

and his or her involvement in life situations. The term *activities* refer to tasks or actions a client is able to perform. Examples for older children and adults include writing, talking, and calculating. The term *participation* refers to activities that become integrated into one's life. Examples for children include regularly taking others to nearby places, talking by telephone with family and friends, and refraining from embarrassing others. This paper discussed important implications of the ICF for the provision of rehabilitation services, including the manner in which disabilities are viewed, assessed, and addressed through research, interventions, and follow-up evaluations. Few psychologists are familiar with the ICF model. This session is intended to introduce the model to psychologists unfamiliar with it and show possible implications of the model for those engaged in rehabilitation science and services.

Keywords: *international classification, rehabilitation, health care services, World Health Organization*

The impact of personal values on one's participation in the community among persons with chronic illness or disability

MPOFU, E. (University of Sydney)

This study investigated consumer values that influence their Community and Independent (CIL) preferences. Knowledge of consumer CIL is central to service delivery, and particularly in view of the self-determination and consumer oriented philosophy that informs CIL outcomes. The WHO International Classification of Functioning, Disability and Health (ICF) consider activity and participation in community settings important indicators of superior rehabilitative interventions. Sixty-eight individuals with disabilities from four centers for Community and Independent Living (CILs) participated (67% female, 25% with cardiovascular conditions, 60% with neuromuscular or musculoskeletal related disabilities, 15% other health conditions). They responded to an open ended statement probe to nominate important values influencing their choice of community living options. Data were analyzed using a mixed method ethnographic approach to construct informant centered

value maps important for guiding counseling for community and independent living choices by CILs. The analysis took into account severity of disability. Individuals with significant or comorbid conditions prioritized service and community access issues relatively more than did those with less complex health conditions. Across disability groupings, informants ascribed importance to participation with social others, including involvement in community leisure activities. Disability friendly laws were considered significant to supporting efforts to secure preferred community living options. CIL solutions values by consumers with disabilities are those that enabled activities and participation for social inclusion. Consumers with disabilities have preferences for CIL they believe to reflect their values, and are important for social inclusion interventions.

Keywords: *disability, chronic illness, community, independent living, rehabilitation*

An International Classification of Functioning (ICF)-based model for assessing environmental barriers and facilitators to activity and participation

STANFORD, J. (Georgia Technical University)

The aim of this study was to present an International Classification of Functioning (ICF)-based model of environmental assessment that incorporates the interactive effects of person (i.e., body function and structure) and press (i.e. environmental barriers and facilitators) on performance (i.e., activity and participation). Although there are a large number of methods used to assess environmental contributions to performance, few adequately address the key person, press, and performance factors that are essential to developing effective environmental interventions. Further, assessment methods vary significantly in the comprehensiveness of information that is collected and how that information is used in determining environmental intervention. This presentation draws from the ICF, current literature on environmental assessment, and ecological models of person-environment interaction to propose a comprehensive model that builds and expands on the relationship capacity and contextual factors as they define barriers and facilitators and impact activity and

participation. Specifically, differences in understanding of the interactions among the key constructs will be reviewed, leading to the development of a model that incorporates and accounts for the interrelationships among these key factors. Analysis of existing models suggested the degree to which the environment acts as a facilitator or barrier to activity and participation can be assessed only in relation to an individual's capacity and his/her performance outcomes. Thus, an assessment model that accounts for the interactive effects of body function/structure and strength of environmental demands (i.e., press) on activity and participation was developed. Press includes *individual factors*, such as preferences and values; *environmental factors*, including physical factors (e.g., attributes of space and products); social factors (e.g., values), and organizational factors (e.g., policies); *external factors* (e.g., legal restrictions, availability of interventions) outside the control of the individual; and *task factors*, such as requirements of the activity (e.g., lifting, pulling, and bending). The proposed model provides a framework for gathering information that is comprehensive, reliable, and valid. Such information is essential for the elimination of environmental barriers, and the promotion of environmental facilitators are to provide effective rehabilitation strategies.

Keywords: *International Classification of Functioning, environmental interventions, performance, rehabilitation, ecological models*

More than just test scores: Holistic neuropsychological assessment utilizing the International Classification of Functioning (ICF) framework"

LEBLANC, J. (Private Practice)

The aim of this study was to review the strengths and weaknesses of quantitative versus qualitative neuropsychological assessment approaches and the meaning of neuropsychological assessment in the context of the International Classification of Functioning (ICF). Current literature regarding meaningfulness of neuropsychological assessment for individuals in a health-care setting will be reviewed in the context of the

ICF framework. The presentation emphasizes neuropsychological assessment's effectiveness for measuring an individual's abilities related to body structures, body functions, identification of limitations and abilities in activities and participation, and the individual's ability to perform in major life areas such as work and education. The merits and limitations of utilizing qualitative and quantitative methods of neuropsychological evaluation are reviewed. A brief representation of assessment methods for providing both qualitative and quantitative information for all major aspects of cognition will be presented, with an emphasis upon their ecological validity in respect to prediction of functional skills. The functional implications of considering assessment from a holistic perspective, including consideration of the individual's culture or other, will be emphasized. Qualities that may impact test performance also are identified. Finally, the role of the rehabilitation neuropsychologist in the context of the treatment team is outlined, including methods for increasing the effectiveness of the rehabilitation team's efforts. Neuropsychological assessment in the rehabilitation and other health-related settings provides information for various needs, including diagnosis, treatment planning and intervention, and establishment of competencies. Many aspects of ICF classification are pertinent for neuropsychological assessment. Obtained data are meaningful only in a person's holistic context.

Keywords: neuropsychological assessment, International Classification of Functioning, rehabilitation, health care services, cognition

Improving employee engagement, well-being and performance: New tools, interventions, and solutions

Chair(s): MACHIN, T. (University of Southern Queensland)

Discussant(s): FOGARTY, G. (University of Southern Queensland)

This symposium will focus on developing better tools, interventions, and solutions to improve important individual and organizational outcomes such as engagement, well-being, and performance. The presenters will represent developments from three continents (Australia, North America, and Europe). The key learning outcomes are: (1) To increase the awareness of researchers of the critical factors that influence employees' engagement with organizational initiatives; (2) To provide managers with solutions that impact positively on organizational and employee well-being; (3) To assist employees to better understand the impact of organizational variables on their well-being and performance; (4) To encourage the deployment of interventions that impact positively on employees' well-being and performance.

Establishing links between organizational climate, employee well-being and historical patient outcomes

MACHIN, T. (University of Southern Queensland), GOH, H. E. (University of Southern Queensland), PATRICK, J. (University of Southern Queensland), JURY, C. (Queensland Health)

This research undertaken in collaboration with Queensland Health analysed the links between dimensions of workplace climate/employee well-being contained in a number of Queensland Health databases, including the Patient Satisfaction Survey, the Clinical Incident database, the compliments and complaints database, the Variable Life Adjusted Display

(VLAD) Database and the Better Workplaces Staff Opinion Survey database. Queensland Health sought to identify in what ways workplace climate is related to patient outcomes using existing datasets collected within the Queensland Health Centre for Healthcare Improvement. The process of establishing links involved matching aggregated data for specific facilities (where possible), or failing that, larger facilities (e.g. Hospital), or the Health Service District. Once the datasets had been matched on location or facility, correlations were calculated between the aggregated scores. The results demonstrated links between the data sets. These links showed that a better workplace climate is associated with greater reported numbers of clinical incidents, especially “no harm” clinical incidents. There was also a link between workplace climate and patient compliments/complaints which show that unsolicited compliments received from patients and their families are clearly related to a number of positive aspects of workplace climate (workplace morale, role clarity, and appraisal and recognition) and individual morale. The results linking workplace climate and patient satisfaction showed that there is a strong positive relationship between overall patient satisfaction and role clarity, and a negative relationship between overall patient satisfaction and both workplace distress and excessive work demands. While these results relate to historical data and therefore should not be construed to reflect the current state of operation within Queensland Health, they are still indicative of some very important relationships. This is the first study to demonstrate that more positive clinical management practices, better perceptions of the workplace climate and better employee well-being are a reflection of a better incident reporting and learning culture in a health care organization, ultimately resulting in improved patient outcomes.

Keywords: *climate, well-being, Queensland Health, job demands, patient outcomes*

Alleviating burnout through enhancing civility among colleagues

LEITER, M. (Acadia University), LASCHINGER, H. S. (University of Western Ontario), DAY, A. (St

Mary's University), GILIN-OORE, D. (St Mary's University)

Hospital units implemented CREW (Civility, Respect, and Engagement with Work) to enhance collegiality. The research evaluated the impact of the procedure on collegial and supervisory relationships, attitudes towards work, job burnout, and work engagement. We implemented surveys before and after the CREW process on the eight intervention units and 32 control units. The survey assessed collegiality (civility and incivility among colleagues), job burnout, attitudes (commitment, satisfaction), perceptions of worklife (workload, control, reward, community, fairness, and values), and absences. The CREW process was implemented through weekly sessions facilitated by hospital personnel with mentoring from research staff. CREW units improved across the full range of measures. For example, a MANOVA for the Intervention group on the social context variables-civility, coworker incivility, supervisor incivility, instigated incivility, and respect-produced a significant improvement from Time 1 to Time 2 ($F(5,413) = 6.271, p < .001, \eta = .070$). A 2 X 2 MANOVA for the social context variables produced a significant interaction of Time with Intervention ($F(5,1958) = 3.25, p = .006, \eta = .008$), confirming a greater improvement in civility among intervention participants. Further, a MANOVA for the Intervention group on the burnout measures—exhaustion and cynicism—and turnover intention—produced a significant improvement from Time 1 to Time 2 ($F(3,418) = 11.58, p < .001, \eta = .077$), and a 2 X 2 MANOVA for the burnout and turnover intention variables produced a significant interaction of Time with Intervention ($F(3,1977) = 3.066, p = .027, \eta = .005$). The results confirm that the CREW process has a significant impact on the quality of interaction among colleagues. The results further support the proposition that improvements in psychological connections with work, job attitudes, and job behaviors accompany these changes in collegiality. The discussion considers the implications for the CREW process and for collegiality for workplace health. The discussion also considers the pivotal role of collegial relationships in the

development of employees' psychological connections with their work.

Keywords: *work engagement, job burnout, collegiality, job attitudes, civility*

Enhancing career management and well-being in changing organizations

VOURI, J. (Finish Institute of Occupational Health),
TOPPINEN-TANNER, S. (Finish Institute of
Occupational Health)

Individuals need resources to cope effectively, and confidence in their ability to succeed in changing organizations and to endure job insecurity. Career management and well-being can be improved by developing coping skills and abilities related to career goal setting and attainment. Preparedness for work life transitions can be increased with group interventions applying techniques of social modeling and active learning. Preparedness means readiness to respond to uncertain outcomes and it enables coping in stressful continuous work life uncertainty or involuntary transitions. For enhancing employees' coping and well-being during organizational changes we developed a group intervention to promote career management preparedness. We aimed to study the effects of the group intervention on well-being, job engagement and work career. The effects of the group intervention were investigated in a randomly assigned field experimental study (RCT-study) during 2006 - 2008 in 17 organizations, involving 718 participants. The mean age of the participants was 50.5 years ($SD = 6.5$) and 88 % of them were women. After the T1 baseline measurements the study comprised three follow-up questionnaires: T2 at the end of the intervention, T3 7-month after the intervention and T4 1.5 years after the intervention. The response rate at T3 was 85.4 %. The proximal effects show a very significant increase in career management preparedness and work life goals among the group participants compared to controls. The 7 month follow-up results of the experiment demonstrated that the intervention significantly decreased symptoms of depression. The intervention also had a conditionally significant beneficial effect on job engagement. The group intervention most benefited those employees who were at

risk of depression. In summary, enhancing career management preparedness in changing organizations has beneficial effects on work goals and well-being, especially among those at risk.

Keywords: *career management, career goals, job engagement, changing organizations, well-being*

The role of health and well-being in safety performance

FOGARTY, G. (University of Southern Queensland)

Descriptive models of how accidents occur are now commonplace in the aviation industry. These models are useful for guiding accident investigation teams and for helping to decide what changes need to be introduced to reduce the possibility of further accidents. However, from a psychological point of view, what has been lacking in the field is an empirical model that links organizational constructs such as safety climate with individual variables such as psychological health and then shows how both of these combine to influence important performance outcomes such as workplace violations and errors. The aim of this research program was to develop and test such a model. The context for this research program was the field of aviation maintenance, where errors and violations represent an extremely serious threat to safety. A multivariate approach was used wherein data collected from safety climate surveys were used to test structural models linking climate, health, and performance. The first study focused on the link between safety climate, health, and maintenance errors. The results suggested that safety climate does not have a direct effect on errors but has a strong indirect effect via the psychological health experienced by individual workers. A second study replicated this finding. A third study extended the model to include workplace violations and demonstrated that the link between violations and errors is not as strong as some might think. This third study also reinforced the causal chain running from safety climate, through psychological health, to errors. At the same time, it showed a strong direct link between safety climate and violations. Health and well-being are often explored in the context of positive work outcomes such as commitment and tenure,

where they have been shown to contribute useful variance. This series of studies shows that they are just as useful when exploring negative outcomes, such as errors in high risk industries. The paper concludes with recommendations as to how these empirical findings can be used to support ongoing initiatives in safety training.

Keywords: *aviation maintenance, accidents, safety, workplace violations, safety*

Tailoring interventions for those in most need: Grouping employees by burnout and engagement

TIMMS, C. (Griffith University), BROUGH, P. (Griffith University)

The experience of either workplace engagement or psychological burnout has profound consequences for both individual well-being and organizational productivity. Most engagement and burnout research however, is based on aggregated data, which overlooks the insights to be gained from specific individual perspectives. The current research aimed to group respondents according to their specific burnout and engagement responses and to identify the resulting group similarities of workload, job control, reward, community, fairness and values (Areas of Work-life Survey, AWS). The research aimed overall, to illustrate the work perceptions of the most at-risk workers, with a view to tailoring interventions specifically for the employees in most need. Three independent samples of employed workers in Australia responded to a survey. Samples one ($n = 255$) and three ($n = 706$) were employees of an education union and sample two ($n = 260$) was a mixed group of employees representing a number of organizations. The Oldenburg Burnout Inventory (OLBI) and the Utrecht Work Engagement Scale (UWES) were employed to classify respondents in respect to the similarity of their responses using K-means cluster analysis. Subsequently differences between groups in regard to the AWS were confirmed using MANOVA analyses. The cluster analysis identified five specific groups of respondents who were most like-minded in regard to burnout and engagement: Empowered, Under-pressure, Unengaged,

Burnout and Severe Burnout groups. Employees within these five groups demonstrated distinct similarities in regard to their scores of workload, control, reward, community, fairness and values.

Keywords: *workplace engagement, psychological burnout, organizational productivity, well-being, workload*

Improving treatment for individuals with co-occurring mental health and substance use disorders

Chair(s): STAIGER, P. (Deakin University)

Studies across the US, UK, Europe and Australia have consistently reported high levels of comorbidity between mental health problems and substance use issues. The co-existence of these problems tends to lead to greater impairments in physical and mental health functioning, poorer psychosocial and day-to-day functioning, increased use of treatment and service resources, greater levels of treatment non-compliance and poorer treatment outcomes. This symposium includes a range of national and international studies which focus on improving treatment outcomes for individuals with co-occurring mental health and substance use disorders. The symposium includes findings from four randomised controlled trials (RCT), a review on best practice for treatment of anxiety and substance use problems and a study focussed on developing a responsive and coordinated service delivery model for dual diagnosis clients. The first paper reports on the evaluation of the Family Intervention for Dual Disorder program. This family intervention integrates the treatment of severe psychiatric disorders and addictive disorders. The presentation will report on outcomes of this multi-site RCT. The second paper is also an evaluation of an integrated treatment program, this time with a specific focus on depression and substance use problems. The findings from two RCTs will be presented. The third paper reports on findings from an integrated treatment for post-traumatic stress disorder, finding clear evidence that it is safe and efficacious to conduct exposure therapy for PTSD among individuals with substance use problems. The fourth paper will report on a review of effective treatments for comorbid anxiety and substance use problems and suggests possible mechanisms underlying

this comorbidity which may require specific attention during treatment. The final paper reports on findings from a study funded by beyond blue which focused on developing a responsive and coordinated service delivery model. 97 individuals with comorbid high prevalence mental health problems and substance use problems were interviewed to ascertain treatment needs and experiences, in addition to reporting on their mental health and substance use characteristics.

Family psychoeducation with patients who have co-occurring substance use disorders and severe mental illness

MUESER, K. (Dartmouth University)

Substance abuse has a negative impact on the course of schizophrenia and bipolar disorder, including precipitating relapses and worsening social and global functioning. Despite the development and empirical validation of different family intervention programs for severe mental illness, little attention has been paid to the development of such programs that target the integrated treatment of severe psychiatric and addictive disorders together. To address this need, we developed and evaluated a family program to treat these comorbid disorders. The Family Intervention for Dual Disorder (FIDD) program was developed for persons with severe mental illness and substance abuse. The FIDD program includes a combination of psychoeducation about dual disorders, motivational interviewing, communication skills training, and problem solving training, delivered over 12-18 months. To evaluate the impact of the FIDD program, a randomized controlled trial was conducted at two sites (in Boston and Los Angeles) comparing families randomized to the FIDD program or a brief (6-8 sessions) family psychoeducation program. A battery of assessments was conducted at baseline and every six months for three years. A total of 108 persons with dual disorders and a key family member were recruited into the study and randomized to receive either the FIDD program or the brief family psychoeducation program. Rates of engagement in both family programs were high, 88% and 84% for FIDD and brief family psychoeducation, respectively, but rates

of longer term retention and exposure to the core elements in each model were lower, 61% and 55%, respectively. The comparative effects of the two family intervention programs over the three year study period are currently being analyzed. This presentation will summarize those outcomes, with a focus on substance abuse, psychopathology, family knowledge about mental illness, family burden and quality of relationships, and social problem-solving. The implications of the findings for the role of the family in the treatment of persons with co-occurring severe mental illness and substance use disorders will be discussed.

Keywords: *substance abuse, schizophrenia, bipolar disorder, family program, comorbidity*

Two randomised controlled trials of CBT for co-existing depression and substance use problems

BAKER, A. (University of Newcastle)

Depression and alcohol/other drug (AOD) use disorders often co-exist, presenting challenging treatment issues for AOD and mental health clinicians. This paper describes two randomised controlled trials evaluating cognitive behavioural therapy (CBT) for co-existing depression and AOD use problems: the SHADE (Self-Help for Alcohol/other drug use and DEpression) and the DAISI (Depression and Alcohol Integrated versus Single-focused Interventions) projects. These studies represent the first large randomised controlled trials of CBT for co-existing depression and AOD use problems. The SHADE project compared 10 sessions of therapist delivered and computer delivered CBT with 10 sessions of person-centred therapy. The DAISI project compared integrated (depression and alcohol) with single focused (depression versus alcohol) interventions and a brief intervention. This paper describes the post-treatment and follow-up results of both trials.

Keywords: *depression, alcohol, cognitive behavioural therapy, comorbidity, person-centred therapy*

Is exposure therapy for post traumatic stress disorder (PTSD) efficacious among people with substance use disorders

(SUD)? Results from a randomised controlled trial

MILLS, K. (National Drug and Alcohol Research Centre, University of New South Wales)

To evaluate the efficacy of an integrated treatment for post traumatic stress disorder (PTSD) (incorporating imaginal and in vivo exposure) among people with substance use disorders (SUD). 103 participants were recruited from SUD treatment services and community referrals in Sydney, Australia (83% response rate). Participants were randomly assigned to receive either i) integrated treatment (IT) for SUD and PTSD ($n = 55$); or ii) treatment as usual (TAU) for their SUD ($n = 48$). Components of the IT included psychoeducation, cognitive behavioural therapy (CBT) for SUD and PTSD, imaginal and in vivo exposure. Participants completed interviews at baseline, 6-weeks, 3- and 9-months follow-up. Over 70% of the sample was re-interviewed at each time point. Intention-to-treat analyses were conducted comparing the outcomes of those who received the IT versus TAU. The mean age of the sample was 35.7 years and 62% were female. The most commonly used substances were benzodiazepines (73%), cannabis (69%), alcohol (67%), heroin (45%) and amphetamines (42%). All participants met DSM-IV criteria for substance dependence and PTSD. The most commonly reported traumas involved physical or sexual assault. Over 75% had experienced childhood trauma; 55% reported childhood sexual abuse. Over the 9-month follow-up period, both the IT and TAU group evidenced reductions in their substance use, however, these were more pronounced in the IT group. The IT group also demonstrated substantial improvements in relation to the frequency and severity of PTSD symptoms, whereas the TAU group demonstrated little change in relation to these outcomes. Contrary to popular belief, exposure therapy for PTSD is safe and efficacious among individuals with SUD.

Keywords: *post-traumatic stress disorder, substance use disorders, treatment, cognitive behavioural therapy, exposure therapy*

Comorbidity between anxiety and substance use disorders is common yet it is poorly understood and poorly treated.

BAILLIE, A. (Macquarie University)

There are few well conducted treatment outcomes trials for comorbid anxiety, mood and substance use disorders. Some recent (2005-2009) outcome literature has focused on specific mechanisms (anxiety sensitivity and tension reduction alcohol expectancies) that may underlie comorbidity between anxiety, mood, and substance use disorders and may lead to more targeted intervention. The research based for understanding and treating comorbid anxiety, mood, and substance use disorders needs to be broadened. In particular research with a focus on i) specifying particular comorbid relationship between, ii) the mechanisms that may underlie and maintain those relationships, and iii) well conducted evaluations of treatments that target those mechanisms.

Keywords: *comorbidity, anxiety, mood disorders, substance use disorders, interventions*

Improving pathways of care for individuals with co-occurring depression/anxiety disorders and substance use problems

STAIGER, P. (Deakin University)

It has been argued that many clients with co-occurring mental health and substance use disorders (dual diagnosis) are falling between the gaps of the health care system resulting in poor long-term outcomes for these individuals. This is particularly the case for those individuals with anxiety and depressive disorders as they are often excluded from accessing mental health services. The rationale behind this project was that careful and informed planning is required in order to develop clear pathways of care between primary and secondary services. 97 individuals with a dual diagnosis participated in an interview which examined the psychosocial and medical characteristics of this group. Thematic analysis of a subgroup investigated consumers' views about the current system,

barriers to effective treatment and suggestions for improvements. Major depression, social phobia and generalised anxiety disorder were the most commonly diagnosed mental health disorders. Alcohol and cannabis were the most commonly used substances. Almost half of the participants had more than one mental health disorder. Consumers reported concerns regarding lack of referral information, and difficulties when entering the system. Consumers also wanted services to take a more holistic view of treatment and to place greater emphasis on assisting them to maintain and develop relationships. It was concluded that both primary and secondary services needed to improve their identification of, and response to, comorbid issues in their clients to ensure they are providing clear pathways of care. Further, care of this group needed to extend beyond clinical symptoms to include wider socio-environmental issues.

Keywords: *substance use disorders, generalised anxiety disorder, social phobia, major depressive disorder, alcohol*

Indigenous responsive healing practices in Africa and South East Asia

Chair(s): SODI, T. (Department of Psychology, University of Limpopo (Turloop Campus), Sovenga, 0727)

Discussant(s): MPOFU, E. (Faculty of Health Sciences, University of Sydney, East Street, Lidcombe)

Calls for the recognition of indigenous healers have been growing louder as there is an increasing realization about the important role that indigenous healers can play in health promotion and community development in many parts of the developing world. Other scholars have criticized psychology and other health disciplines for being Eurocentric and unresponsive to the needs of the inhabitants of the developing world. Central to this critical voice is the view that the different psychological theories are not universal, but are embedded in a western cultural and socio-political matrix. Whilst recognizing the importance of modern psychological theories in health promotion, the presenters in this symposium are arguing for the need to consider indigenous healing as a viable and psychologically meaningful healthcare resource that can benefit the majority of people in the developing world. The main objective of the symposium is to present the results of a few studies that have investigated the psychological basis of indigenous healing in three diverse cultural contexts (namely Africa, Southeast Asia and Australia). The first paper focuses on the process of becoming an indigenous healer and identifies the important role that spirituality plays in shaping the training and practice of indigenous healers. In the second paper the presenter critically looks at the limitations of the trauma theories that have been applied in the assessment and treatment of trauma in the post-war regions of Southeast Asia (Cambodia, Laos, Burma). She proposes an assessment and therapeutic framework that accounts for spirit-based perceptions/ worldviews as a way of increasing experiences of protection for

individuals and whole communities in Southeast Asia. The third paper looks at culturally relevant counseling strategies to assist African humanitarian entrants to Tasmania. The presenter identifies and recommends activities like community gatherings as some of the culturally appropriate counseling pathways that can benefit this minority community in Australia. The fourth and fifth papers look at indigenous healing practices in the northern part of South Africa and generally conclude by suggesting that this is a meaningful and culturally patterned therapeutic system that needs to be developed and supported.

The process of becoming an indigenous healer: Phenomenological accounts by indigenous healers in rural South Africa

MAKATU, M. (Department of Psychology, University of Venda, Thohoyandou, 0950)

This study is part of a larger funded investigation that sought to understand and describe indigenous healing practices among the Venda, Shangaan, Northern Sotho and Ndebele communities of Limpopo Province, South Africa. In this paper, the author specifically focuses on indigenous healers' own accounts of how and why they became traditional health practitioners. Both purposive and panel sampling procedures were used to identify and select the 12 indigenous healers who participated in this study. The indigenous healers were selected from the local chapters of the traditional healers' organizations in Limpopo Province. In this regard, 3 indigenous healers were identified and selected from each of the four indigenous language groups found in this particular province (i.e. 3 Tshivenda speaking indigenous healers; 3 Xitsonga speaking indigenous healers; 3 Northern Sotho speaking indigenous healers; and 3 iSindebele speaking indigenous healers). Interviews were used to collect the data. For most of the participants in this study, becoming an indigenous healer is a process and experience that is associated with spirituality. In almost all the cases, the participants reported that they were "called by their ancestors" to join the healing profession. This "call" to join the indigenous healing profession is usually communicated by the ancestors in the form of

an illness. Anyone with such illness is expected to go through a process of training in order to become an indigenous healer. The results of this study are discussed in the context of the role of culture in health, illness and healing. The study is concluded by suggesting that some conditions of ill health may be perceived as positive and growth-promoting if understood within the cultural contexts of the communities where they occur.

Keywords: *indigenous, healing, illness*

Influx of “Trauma” theories and practices developed in Judeo-Christian countries and their relevance to “spirit-based anxiety” in SE Asia

LEVINE, P. (Monash Asia Institute, Monash University, Melbourne)

The influx of NGOs who claim to specialise in assessment and treatment of “trauma” in post-war regions in SE Asia (Cambodia, Laos, Burma) and refugee border camps has increased over the years. This author will outline how Posttraumatic Stress Disorder (PTSD) has emerged out of a context influenced by American, Judeo-Christian, capitalistic-democratic values, yet, PTSD is assumed to be universal. [PTSD was developed in the United States following research conducted on American Vietnam Veterans, and listed as a mental disorder in 1980.] By reviewing methods by which ‘evidence-based research’ is gathered, this author aims to show how symptom-based checklists on trauma are continually funded with little consideration to the cultural complexity of terms of distress, and village-based contexts. For example, most recently a USA-funded project in Cambodia highlighted ‘forgiveness’ (found evidence) as a psycho-emotional state related to trauma recovery with little consideration to Buddhist and animistic perceptions of karma, spirit possession, and indigenous village processes for reconciliation. To date, there has been little scope from which to account ‘formally’ for influences of spirit phenomena embedded in the fabric of SE Asia’s geo-culture. The author of this paper conducted a 7-year qualitative study (film ethnography) on breakdown of ritual practices during the Khmer Rouge regime era and found “spirit-based anxiety” (her term)

to be relevant to Cambodian experiences of distress. She will show a sample of this film work. To date, consideration of spirit influences is regarded often as ‘culture-bound’ and attention to such influences on people’s wellbeing has been marginal in scope – while institutional religions are infiltrating mental health practices in ways that are subtle. The author will differentiate between Western notions of spirituality and SE Asian notions of spirit influences. The author will propose ways to safeguard mental health development from religious-biased research and practices in mental health. She will present a framework for assessment that accounts for spirit-based perceptions/ worldviews as a way of increasing experiences of protection for individuals and whole communities

Keywords: *trauma, mental disorders, reconciliation, distress, forgiveness*

“Opening the Way”: Significance of traditional African healing practices reported by male African humanitarian entrants in Tasmania

HARRIS, A. (Department of Rural Health, University of Tasmania, Launceston)

This study sought to identify culturally appropriate counselling pathways for African humanitarian entrants to Tasmania. It was prompted by the recognition that Western approaches to overcoming traumatic events did not have sufficient scope to meet the needs of this client group. A phenomenological approach was taken to the material. 8 Christian and 8 Muslim participants from six African countries were interviewed about their knowledge and experience of problem solving. In addition, ethnographic observation was conducted by invitation at ten African gatherings in Tasmania. A review of literature on African culture and healing was conducted, and two consensus groups of five additional participants each from Sudan and Sierra Leone assisted in refining the findings. Community gatherings were identified by all participants as central to problem solving. Reports of indigenous healing practices were pivotal in developing a more comprehensive appreciation of the meaning of community for Africans, and in particular the potency

associated with ancestral influence, spirit beliefs, religion, and the physical environment. Most western counseling and psychological practices incorporate assumptions of individual self-hood, founded on philosophical ideas which are too restrictive for African humanitarian entrants. Dismissing African traditional beliefs as “magical thinking” is likely to be counter-therapeutic: instead, inclusive approaches to difficult problems are recommended.

Keywords: *culture, counselling, traumatic events, African countries, humanitarian entrants*

Diagnosis, treatment and prevention of illness by indigenous healers in Limpopo Province, South Africa

MASHAMBA, T. (Department of Psychology, University of Venda, Thohoyandou, 0950)

In Africa and the rest of the developing world, there has been a growing realization of the importance of traditional medicine in health promotion and the treatment of various illnesses. In some developing countries like South Africa, there have been suggestions that up to 80% of the population make use of the services of indigenous healers at some point in their lives. In this paper, the results of a study that explored indigenous healing in the rural communities of Limpopo Province (South Africa) are presented. Specifically, the paper focuses on indigenous healers’ descriptions of their diagnostic, treatment and preventive approaches to various forms of illness. A qualitative approach was adopted in the present study. Following the principles of purposeful and panel sampling, 12 indigenous healers were selected and interviewed to capture their own descriptions of the diagnostic, treatment and preventive methods that they use in assisting their patients. Data was recorded through an audiotape. This data was later transcribed before it was translated and analyzed. The study found that most indigenous healers rely on divination bones and the spiritual guidance of their ancestors to diagnose the illnesses that their patients suffer from. It was also found that indigenous healers use a wide range of treatments methods to assist their patients. These, among others, include, psychological counseling, some simple

“surgical methods”, rituals and some therapeutic dances. In some cases, patients are encouraged to engage in some ceremonial acts to prevent illness and to promote family stability. The paper is concluded by calling for more studies to investigate this alternative form of health care in view of its great potential in the treatment of illness and other ailments in indigenous African communities.

Keywords: *Africa, healing, indigenous, illness, counselling*

Tshililo, the indigenous healer: Psychological interpretation of healing in a Venda community, Limpopo Province

TAKALANI, J. (Department of Psychology, University of Venda, Thohoyandou, 0950)

This article is based on the results of a larger study that investigated indigenous healing in Limpopo Province. Using excerpts from interviews with Tshililo (one of the twelve indigenous healers who participated in the study), the author looks at how this particular healer understands and explains his work with clients. The specific objectives were to: a). identify the psychological elements that are associated with indigenous healing; b). provide a psychological interpretation of the healing procedures that are used in indigenous healing; and, c). identify and describe the steps followed in indigenous healing. Given the nature of the issues that this study aimed to investigate, a qualitative research method was considered appropriate. The face to face phenomenological interview technique was employed in this study. Informed consent was obtained from the indigenous healer before the interviews were conducted. All in all two interviews were conducted at the indigenous healer’s homestead. The interviews were conducted in Tshivenda and later transcribed before they were translated into English. The subjective and experiential accounts by the indigenous healer were analyzed so as to identify central themes that have psychological insights. A further analysis of these central themes suggests that indigenous healing is a logical and psychologically meaningful process that can be divided into three phases, namely: the initial phase, treatment phase and terminal phase. The paper is concluded by arguing that

traditional healing is a meaningful and culturally patterned therapeutic system that needs to be developed and legitimized as health care resource in South Africa.

Keywords: *healing, indigenous, illness, treatment*

Individual and social factors in health behaviour change

Chair(s): SCHOLZ, U. (University of Zurich)

Discussant(s): LUSZCZYNSKA, A. (University of Colorado; Warsaw School of Social Sciences and Humanities)

Health-behaviour change is a difficult endeavour. Psychological theories of health behaviour change specify self-regulatory factors that are assumed and have been proven to be important for successful behaviour change. However, even if health-behaviour change occurs on the individual level, it is something that takes place within a social context, e.g., intimate relationships, family, workplace, neighbourhood or peer groups. Most psychological theories of health-behaviour change have so far excluded social factors, although research provides evidence for the importance of these factors for individual behaviour change. This symposium brings together research from different areas of health behaviour change and emphasises the role of both individual and social factors. The importance of integrating both individual and social factors is demonstrated by research from various real-life settings. The first two contributions from Schueler and Brandstaetter and from Mullan examine the role of individual factors in interacting with the environment during health-behaviour change. The paper by Schueler and Brandstaetter addresses the topic of person-environment fit and its associations with flow experience. Flow experience is a key motivational factor for initiation and maintenance of a physically active lifestyle. The paper by Mullan focuses on an extension of the Theory of Planned Behaviour by including executive functioning and behavioral prepotency, two rather underresearched factors in health-behaviour change. The paper examines the importance of these two constructs for four different behaviours. Social factors are addressed by the papers of Schuez and colleagues and Scholz and Hornung. The paper by Schuez and colleagues examines the relative contribution of receiving social support to

medication adherence over and above specific and general beliefs about medicines in an elderly sample. The paper by Scholz and Hornung addresses the question on the added value of including social support and social control for predicting changes in diet and changes in cigarette smoking. These four papers and the integrative discussion by Aleksandra Luszczynska present innovative research in health psychology, and with the integration of both individual and social factors outlines promising future directions for research on health behaviour change.

The person - environment fit as a determinant of intrinsic motivation in sports

SCHÜLER, J. (University of Zurich)

According to motivation psychology, motivation results from an interaction between a person's motives and adequate incentives of the environment. In the present research we hypothesized that the goodness of fit between a person's motive (e.g., achievement motive, affiliation motive) and the incentives in sports (e.g., achievement incentives, affiliation incentives) predicts flow experience which is known to be associated with sport adherence. To be more precise, individuals with a high motive were hypothesized to benefit more in their flow experience from situations characterized by corresponding incentives compared to individuals low in the motive. But they were also expected to suffer more when corresponding incentives are lacking than low motivated individuals. Three correlational field studies and one experiment in different domains of sport were conducted to test the hypothesis. In Study 1 we were interested in flow experience in badminton players and focussed on the achievement domain. We measured participants' achievement motives and asked how strong achievement incentives (e.g., opportunity to get realistic feedback) characterize their sport situation. In Study 2 we measured participant's achievement motive and experimentally induced achievement incentives in a volleyball exercise. In Study 3 (correlational field study) we measured participant's achievement and affiliation

motives and asked for incentives in fitness sports. In Study 4 an expert rating revealed different incentive profiles of sports (e.g., fitness, combat, basketball) which were used to test the hypothesized incentive (expert rating) x motive (of participants) interaction. As expected, all four studies showed that individuals whose motives fit to the incentives of the sport situation reported more flow than individuals whose motives did not fit to the sport incentives. Participants with a high motive who did not experience corresponding incentives in their sport environment reported the lowest amount of flow. The results indicate that a person (motive) x environment (incentive) fit approach is useful to explain optimal motivation in sport. The practical implications for health promotion programs will be discussed.

Keywords: *motivation, sport, flow, achievement, health promotion*

Exploring the role of executive function in the performance of health behaviours

MULLAN, B. (University of Sydney)

The aim of the Theory of Planned Behaviour (TPB) is to identify factors that impact upon the performance of a particular behaviour, and consequently predict this behaviour. The application of the TPB has been largely successful in the health domain; however prediction is still far from perfect, suggesting that there are additional variables that need to be considered. Hall and Fong have proposed that behavioural prepotency (BP) and biologically imbued self-regulatory capacity, or executive function (EF), may be relevant to the performance of health behaviours. Thus, the aim of the current research is to determine whether the addition of BP and EF to the TPB will improve its predictive power. Four prospective longitudinal studies were conducted with undergraduate students, examining breakfast consumption, sleep hygiene, safe food handling behaviours, and dietary behaviours. The two facets of EF examined were planning and response inhibition, as these were considered to be most relevant to the performance of health behaviours. TPB and BP data were obtained via online questionnaires and EF data was

obtained via computerised neurocognitive tasks - including the Go/No-go task, the Stroop task and the Tower of Hanoi. A week later, behaviour was assessed. Data were examined using hierarchical regression analyses. The TPB was successful at predicting all four of the behaviours. BP improved the prediction of all behaviours. Measures of EF were found to predict additional variance in both breakfast consumption and sleep hygiene. However, EF did not predict any additional variance in either safe food handling or dietary behaviours. These studies suggest that, while certain facets of EF may not be relevant in some health domains, there does appear to be some connection between EF and the performance of health behaviours. However, the inconsistency of the results suggests that this relationship is stronger in certain behaviours than in others. All behaviours were similar in that they were habitual, suggesting other factors need to be explored, for example behaviours that reward immediately versus distally. A further direction for future research would be to look at different facets of EF and the relationship between BP and EF.

Keywords: theory of planned behaviour, behavioural prepotency, executive function, health behaviours

Beyond beliefs: Social and cognitive factors affect medication adherence in elderly individuals with multiple illnesses

SCHÜZ, B. (German Centre of Gerontology)

To determine predictors of adherence to medication in elderly people suffering from multiple illnesses. As they grow older, most people suffer from an increasing number of illnesses. This results in complex patterns of multiple illnesses often requiring complex treatments. A central part of effective treatment is individual adherence to prescribed medication. However, this is complicated by the fact that older people often have to take multiple medications with complex regimens, which makes suboptimal adherence more likely. Research according to the common sense model of health and illness suggests that individual specific and general beliefs about medicines are important predictors of adherence behaviour. We extend

this view by integrating social support into the prediction of adherence and - for the first time - examine these cognitive and social factors in a sample of elderly people with multiple illnesses. Longitudinal interview- and questionnaire-based survey with a 6-months interval in $n = 309$ individuals aged 65+ suffering from 2 or more diseases. Self-reports for medication adherence (Reported Adherence to Medication Scale), general and specific beliefs about medicines (Beliefs about Medicines Questionnaire), received social support for medication adherence, number of medicines and health status. Logistic regression analysis was used to determine social and cognitive predictors of optimal or suboptimal medication adherence. After controlling for baseline adherence (OR=2.89), general beliefs about medicines (OR=1.52) and received social support (OR=1.62) emerged significant predictors for medication adherence 6 months later. The total number of medicines did not predict adherence, neither in main nor interaction terms. Partial support was found for the model of medication adherence implied by the common sense model: General beliefs about medicines are more important in predicting the medication adherence of older adults with multiple illnesses than specific beliefs. This might be due to the fact that individuals suffered from multiple diseases with potentially interacting beliefs about medication efficacy. Individuals with good social support were more adherent to medication, which underlines the importance of supportive networks for individuals with multiple illnesses. General beliefs about medication however remain a challenge for interventions, as broad expectations are more difficult to change than specific cognitions.

Keywords: adherence to medication, elderly people, common sense model of health, social support

Combining social exchange processes and individual self-regulation: Impact on intention formation and health-behavior change

SCHOLZ, U. (University of Zurich)

In traditional models of health behavior change, social exchange processes, such as

social support and social control are rather neglected. At the same time, there is a growing body of research on social exchange processes and health-behavior change that, in turn, rather ignores the individual factors assumed important in health behavior change theories. A combination of both lines of research seems beneficial in order to examine whether social exchange processes add to the explanation of intention formation and behavior change over and above established individual self-regulatory variables. These two studies aimed at investigating whether behaviour-specific received social support and social control were able to predict change in behavioural intentions and change in behaviour in competition to well-established predictors as specified in the Health Action Process Approach (HAPA). In Study 1, 163 participants ($n = 81$ women, 49.7%; mean age = 31.3, $SD = 9.98$) completed two online-questionnaires on smoking-specific HAPA-variables and smoking-specific social support and social control within a 4-weeks interval. In Study 2, 270 overweight and obese adults (72.1% women, mean age = 53.7, $SD = 12.59$) completed questionnaires at baseline and 12 months later on nutrition-specific HAPA-variables and nutrition-specific received social support. In Study 1, social exchange processes were not related to intention formation over and above individual factors. However, for change in smoking behavior a significant positive association occurred with social control. No association emerged with social support. In Study 2, social support added to change in intentions as well as to change in diet across the 12-months period over and above individual self-regulation. Overall, social exchange processes seem to play an important role for intention formation and behavior change over and above individual self-regulation. In case of social control for smoking cessation, however, the positive association with behavior indicated potential detrimental effects of social control. Moreover, the two studies, suggest differences in effectiveness of social support and social control for different behaviors.

Interactional leadership

Chair(s): SCHYNS, B. (University of Portsmouth)

Discussant(s): DEN HARTOG, D. (University of Amsterdam)

Leadership emerges through social interaction. Research and leadership practice increasingly acknowledge that leaders and followers interact to construct the process called leadership. It is not only individual followers but also groups as a whole that influence the emergent leadership process. The interaction between leaders and followers and the interaction within a group are keys to successful leadership. In this symposium, the contributions focus on illuminating the process of leadership in the context of dyadic and group interaction. The aim is to enhance our understanding of interactional leadership from different perspectives. Presentation One focuses on the effects of group participation in goal setting. Their work extends goal setting research to a group level. The key question is whether or not leaders can enhance their group's performance by giving them a choice to participate in setting their own goals. The authors show that this is indeed a promising path for future research. Presentation Two outlines the importance of examining leader-member relationships in a broader context. Prior research has focused mainly on the (isolated) follower's perspective. The authors' review of the literature revealed that leader and follower agreement regarding their relationship as well as within group consensus regarding Leader-Member Exchange (LMX) relationship is vital for leadership success. Presentation Three investigates the process through which charismatic leadership influences different types of outcomes. They posit that charismatic leadership interacts with followers' personal and relational self-concepts when predicting outcomes on different levels, indicating the importance of both leaders' behaviour and follower characteristics in successful leadership. Finally, Presentation Four investigates the role of group consensus regarding transformational leadership in follower stress. They argue that consensus in transformational leadership serves as a resource for that reduces followers' stress;

however, they find this effect only for their female participants. Thus, group processes maybe of differential importance for male and female followers. In conclusion, this symposium highlights the importance of leadership as an interactional process. Leadership needs to be examined taking into account leader-follower as well as intra- and inter-group processes.

The benefits of participative group goal setting become apparent as tasks become increasingly challenging over time

WEGGE, J. (Technical University of Dresden)

A large body of research has pointed to the utility of individual and group goal setting as a performance enhancement strategy. However, group goal setting is more complex than individual goal setting as the group context often strengthens the desire for voice and the possibility of resistance. In line with this idea, we test the prediction that goal-related performance improvements should be more marked where groups participate in goal setting rather than having goals imposed — particularly as they become increasingly hard to achieve. Two experiments were conducted ($N_{\text{groups}} = 27, 72$). In both studies small groups of three or four students took part in brainstorming exercises in three phases. In Phase One, groups were instructed to identify as many uses as possible for a common object in five minutes. This established a “do your best” baseline against which performance in subsequent phases can be compared. In subsequent phases groups were randomly assigned to one of three (Study One) or five (Study Two) independent conditions. One of these was a control condition, in which groups were asked in each phase to continue to “do your best”. In other conditions the groups in Phases 2 and 3 were invited to set a performance improvement goal (+20% vs. +40% or +40% vs. +80%) either set by the experimenter or by themselves with reference to a goal suggested by the experimenter. The results of both experiments confirm the capacity for group goal setting to enhance brainstorming performance. More importantly, both studies also show that the benefits of participative goal setting become more marked as goals become more difficult over time. In

line with social identity and self-categorization principles, we suggest that this is because increases in participative set goals appear to provide opportunities for collective self-actualization and self-enhancement while increases in imposed goals do not. The present studies lead the conclusion that if groups are to be encouraged to take on and accomplish goals that become increasingly difficult over time, there is much to be gained from the process of enjoining their members in the process of setting goals.

Keywords: *goal setting, performance, goal setting, brainstorming*

Agreement, consensus, and excellence in Leader-Member Exchange

DAY, D. (University of Western Australia)

The relationship quality that develops between leaders and their followers has interested researchers and practitioners ever since the introduction of the Leader-Member Exchange (LMX) approach in the 1970s. A primary reason for this continuing interest is that research has shown that high quality LMX relationships are positively related to desired organisational outcomes such as individual commitment, job satisfaction and performance. While originally conceptualised as a dyadic construct, the group context in which relationships develop has not received the same level of theoretical or empirical attention. We will provide an overview of the more recent developments in the field of leader-member exchange (LMX) theory including the emergent focus on the broader context in which dyadic exchanges develop. This is a theoretical paper. An overview of prior literature and research is provided, mainly concentrating on recent research into the question how leader-member agreement and follower consensus regarding LMX relationships develop and what consequences they have. This will be used to derive propositions for future research. Having reviewed the literature, it becomes clear that there is an optimal LMX combination, that is, high-quality LMX, high leader-member agreement as well as high group consensus in LMX quality. We introduce this as LMX excellence. While recent research and theory supports this notion, in organisational

contexts, LMX excellence might be difficult to achieve. We identified several factors that can enhance or hinder the development of LMX excellence. Examples include role clarification, climate and social identity. From our analysis of the literature, we conclude that taking into account not only one side (i.e., follower or leader) but both sides of the exchange relationship as well as the group context in which relationships develop is vital to establishing and maintaining the positive effects connected with LMX relationships. We recommend for leaders and organisations as well as researchers to take a 360 degree look at LMX, including intra-group relationships.

Keywords: Leader-Member Exchange (LMX), job satisfaction, performance, leadership, leader-member agreement

Interactive effects of charismatic leadership and follower identity orientations

KERSCHREITER, R. (Ludwig-Maximilian University)

Charismatic leadership theory posits that charismatic leaders enhance followers' motivation and performance. The identity orientations framework holds that the way people define themselves as being more individuated (personal self-concept) or more interpersonal oriented (relational self-concept) influences how they interact with others. Therefore, the impact a charismatic leader has on a follower should also depend to a certain extent on the follower's activated self-concept. In line with this idea, the present studies test the prediction that a follower's self-concept and leader charisma interact. Furthermore, we expect different effects for personal and relational outcome variables depending on follower self-concept (personal vs. relational). With regard to more personal outcomes (satisfaction, turnover intentions) we predict the relationship between leader charisma and these outcomes to be stronger, the more followers define themselves as being individuated (personal self-concept). With regard to more relational outcomes (performance) we predicted the relation between leader charisma and performance to be stronger, the more followers define themselves as being member of a role

relationship (relational self-concept). Two employee surveys ($N_1 = 234$ and $N_2 = 135$) were conducted in two regional German credit institutions. We measured charismatic leadership, employee self-concept, satisfaction, and turnover intentions using a questionnaire format. Employee performance was rated by the employee's direct supervisor. As predicted, the relationship between leader charisma and personal outcomes (satisfaction, turnover intentions) turned out to be stronger the more followers defined themselves as being individuated (personal self-concept). In contrast, the relationship between leader charisma and performance turned out to be stronger the more followers defined themselves as being member of a role relationship (relational self-concept). Combining insights from charismatic leadership theory and the identity orientations framework, the present studies showed that the attribution of a charismatic leadership style and a person's identity orientation interact in predicting performance, turnover intentions and satisfaction. This indicates the importance of both leaders' behaviour and follower characteristics in successful leadership.

Keywords: charismatic leadership, motivation, performance, self-concept, leadership

Occupational resources and strain: Moderator effects of gender and consensus of transformational leadership

FELFE, J. (University of Siegen)

"If we agree I feel better!" Can shared perceptions of the supervisor of the team mitigate perceived stress? The aim of the study is to examine the meaning of consensus with regard to leadership perceptions for employees' health. Based on a follower-centred approach to transformational leadership, the meaning of team consensus for employees' well-being is analyzed. It is argued that transformational leadership also resides on the group level and thereby adds information about the consistency of leadership behaviours. It is hypothesised that consensus concerning leadership moderates the relation between resources and perceived strain. Furthermore, we expect gender to moderate the resource-strain relationships.

Data was collected from 347 employees from 30 groups in a public administrative organisation. For data analysis a multilevel approach was employed. As expected the results show that resources are negatively related to overload and irritability as negative health indicators. Contrary to our expectations consensus does not moderate the relationship of resources and strain. However, according to our hypothesis gender was found to moderate postulated relationships. The moderating effect of consensus on the resource-strain relationship is stronger for women. Consensus enhances the impact of resources for women, but not for men. The results are of theoretical and practical relevance. From a theoretical perspective our findings provide deeper insight into the functioning of consensus. Obviously women benefit more than men when consensus is high and suffer more when consensus is low. Thus consensus can be considered as a gender specific resource. For the design and implementation of occupational health programs we recommend to put more emphasis on consensus if there are a considerable high number of women and not to expect too much from consensus in groups or organizations with low number of women.

Keywords: transformational leadership, gender, consensus, leadership, teams

International perspectives on social justice in vocational psychology: Theory, research, and practice

Chair(s): DIEMER, M. (Michigan State University)

Discussant(s): MCILVEEN, P. (University of Southern Queensland)

Social justice-oriented vocational psychologists struggle to translate their moral concern with and conceptual understanding of injustice into scholarship and practice that address these inequities and shape a more just world. These are shared concerns internationally, although the nature and shape of social injustice may differ by nation. To redress the gap between social justice rhetoric and research/practice, this symposium examines conceptual, scholarly, and practice social justice issues that span four nations. Five complementary presentations consider social justice issues shared and unique to each nation, drawing on insights from each to enhance the generalizability and impact of the proposed symposium across disparate contexts. The first two presentations consider how Canadian and Australian practitioners (respectively) conceptualize socially just vocational practice, the barriers they face in implementing social justice in practice, and pedagogical/training issues in preparing the next wave of social justice-oriented practitioners. The third presentation critiques vocational guidance practice in South Africa while explicating how more socially just practices are emerging to better meet the needs of historically marginalized people. The fourth presentation discusses research examining how a consciousness of and motivation to change social inequities, critical consciousness, engenders marginalized youths' career development in the U.S. The fifth presentation details the implementation of socially justice career interventions in rural Australia, in order to redress geographic disparities in career aspirations and postsecondary education. The learning objectives of this symposium include:

(1) Understanding “local” and “global” social justice issues in vocational psychology, (2) Learning the barriers to implementation practitioners voice, and strategies practitioners may use to translate their concern for social justice into practice, and (3) Learn how vocational psychology research and practice may better serve marginalized people by considering their consciousness of social inequalities and reconfiguring traditional career guidance services. These complementary presentations highlight themes across disparate contexts while honoring the local concerns and culture of each nation. The discussant has international vocational psychology expertise and will further the cross-fertilization of these ideas across disparate contexts. In sum, this symposium aims to facilitate a greater concern for and implementation of social justice into vocational psychologists’ theory, scholarship, and practice across the globe.

Social justice: A great concept but hard to practice

ARTHUR, N. (University of Calgary), MCMAHON, M. (University of Queensland), COLLINS, S. (Athabasca University)

The call for social justice has recently gained momentum in the career development literature; however, there is a lack of clarity about the implications for career development practice. This presentation highlights findings from research with Canadian career development practitioners, including the ways practitioners define and integrate social justice into their work, as well as the barriers that they face. Implications for practice and for career development education will be discussed. An on-line survey was developed based on items conceptually derived from available literature and revised following expert review. Open-ended questions, based on the Critical Incident Technique invited career development practitioners to provide samples of their best practices with social justice interventions and samples of barriers to such practices. Results showed the multiple meanings of social justice and what populations are defined as having social justice needs. Career development practitioners reported that their awareness of social justice

were much stronger than their knowledge or skills for interventions to address social justice. Analysis of intervention approaches show that most continued to work directly with individual clients, despite the recognition of systemic influences on client issues. Barriers to enacting social justice interventions were apparent in the organizational context where practitioners work, due to lack of training, and concerns about trying to address structural and social change. The results from this study suggest that although career practitioners value social justice and see many inequities in educational, employment, and other social resources that impact their clients, many struggle with how to implement interventions to address social justice. The call for social justice as a guiding value in career development practices must be matched with curriculum that prepares practitioners with related competencies for working directly with clients, on behalf of clients, for organizational change, and to address change in broader social structures. In turn, the findings suggest that the need for guidelines and standards of practice to articulate stronger linkage between social justice and career development practices.

Keywords: social justice, career development, employment, transition, critical incident technique

Social justice: Perceived competencies of Australian career development practitioners

MCMAHON, M. (University of Queensland)

Social justice has been a guiding principle of career development throughout its history. The aim of this research study is to identify the ways that Australian career development practitioners conceptualize and implement social justice. Participants were Australian career development practitioners. Data were gathered by means of an online survey, structured in three parts. This paper focuses on data collected from two parts of the survey. First, information was sought on participants’ attitudes, skills and knowledge related to social justice competencies through a series of multiple choice items on two separate scales, importance to career practice and current competency level. Second, an optional part of the survey gathered information on critical

incident scenarios related to social justice practices. Thematic analysis was used to analyze the critical incident scenarios and competencies demonstrated by practitioners in the critical incidents were identified. Demonstrated competencies of individual participants' were considered in relation to their perceptions of the importance of and their competency levels in a range of social justice skills, knowledge and attitudes. The results provide insight into participants' perceptions and practices of social justice. Evidence of commitment to socially just practice by Australian career development practitioners is attested to in the results. The results also illustrate how social justice competencies perceived to be important are demonstrated. Most social justice interventions tended to be at the individual level and few were at a systemic level. The study suggests that further training may be beneficial in developing social justice competencies.

Keywords: social justice, career development, critical incident scenarios, training, social justice competencies

Social justice and social transformation in South African career psychology: Rhetoric and action

WATSON, M. (Nelson Mandela Metropolitan University)

This presentation describes the role of social justice and social transformation in career theory, research and practice in South Africa and the extent to which these issues have been addressed and redressed in both South African literature and practice. Recent international literature cautions that reflection without action and action without reflection will not advance social justice and transformation agendas in career psychology. With this in mind, the presentation explores the gap between the ideology of social justice and transformation agendas and the realities of the contexts in which the majority of South Africans attempt to work or to develop a career. The impact of the historical context of apartheid has been well documented, yet the persistence of dysfunctional educational and governmental systems has been less so. This

had led to the perpetuation of inequality with only a small burgeoning middle class black population seeming to benefit from social transformation agendas. The scale of existing social injustices and the lack of sufficient social transformation is evident in two 2009 South African surveys. One survey cites the fact that just under half a million children have never attended school or have dropped out. The second survey concludes that South African career guidance is a marginalized national priority, lacks coordination and leadership, and is a largely devolved, dispersed, adhoc set of activities. The lack of a sustained emphasis on social justice and transformation issues in South African career psychology is considered within the context of international recognition that powerful and affluent individuals and organizations are essential if these issues are to translate from rhetoric to action. The presentation considers recent initiatives to transform the role of career guidance in South Africa by creating a more socially just, transformative and accessible service, as well as international calls for collaborative theory building, research and practice in career psychology. Given the extensive scale of historical and contemporary social justice and transformation issues in South Africa, as well as the limited infrastructure and personnel resources to address/redress these issues, the presentation considers the challenge of what to do with qualitative concepts and issues within quantitative contextual realities.

Keywords: social justice, social transformation, career psychology, career guidance, South Africa

Critical consciousness & career development among North American marginalized youth

DIEMER, M. (Michigan State University)

In North America, structural barriers constrain marginalized youths' occupational self-concept – comprised of work salience and vocational expectations. Critical consciousness (CC), the consciousness of and motivation to reduce sociopolitical inequality, may facilitate the negotiation of these structural constraints. CC may assist youth in situating their individual effort within an inequitable opportunity structure, or how to “play the games of school

and work on an uneven playing field.” This paper extends previous CC/career development scholarship (Chronister & McWhirter, 2006; Diemer & Blustein, 2006; O’Connor, 1997) by (a) examining these relationships by racial/ethnic group (b) exploring measurement invariance across groups and over time (c) and testing model sensitivity with more privileged youth. Structural equation modeling examined CC’s direct and longitudinal impact on work salience and vocational expectations among samples of low-SES African American, Latino/a and Asian American youth, while controlling for academic achievement. Measurement and temporal invariance of these constructs was established before testing the proposed structural model. The participants of this study were 2,627 10th and 12th graders from a North American large scale survey. CC, work salience and vocational expectations were found to be invariant across these three racial/ethnic groups and over time, providing construct validity evidence. Across the three samples, 10th grade CC had significant direct effects on 10th grade work salience and vocational expectations; 12th grade CC had a significant effect direct on 12th grade work salience. 10th grade CC had significant longitudinal effects on 12th grade work salience and on 12th grade vocational expectations. The structural model did not fit well for more privileged samples (affluent Whites, low-SES Whites, affluent youth of color) in the sensitivity analyses, suggesting that CC’s effects on career development are more salient for marginalized youth. These findings suggest that SPD facilitates the agentic negotiation of constraints on the development of work salience and vocational expectations. Rather than avoiding structural inequity for fear of “discouraging” marginalized youth, career counseling, interventions, and guidance may be augmented by greater attention to structural constraints and facilitating youths’ CC. Given the relation of adolescent career development to adult occupational attainment, CC may be a “socially-just” means of facilitating social mobility.

Keywords: critical consciousness, career development, work salience, vocational expectations, career counselling

Using Career Development Learning to Raise Career Aspirations in Rural School Children

MCILVEEN, P. (University of Southern Queensland)

Entry and transition into higher education in Australia is ostensibly equitable, yet there are evident disparities in the levels of access by high school students from rural and isolated communities. Raising rural students’ aspirations for higher education and careers which extend from university qualifications, as an objective of redressing this imbalance, has received some attention in government policy and educational practices. However, rural high school students’ access to career development learning programs delivered by appropriately trained practitioners is extremely limited. This paper addresses a program of career development learning provided by an Australian university, which has aimed to enhance rural students’ career aspirations to include higher education. A longitudinal study of participants’ experiences of an intensive career development learning intervention is reported. Approximately 18-months after the intervention, a sample of participants were interviewed to explore their experiences of the intervention and its impact upon their vocational planning. Interview transcripts were analysed using an adaptation of the qualitative research method interpretative phenomenological analysis (Smith & Osborn, 2003). Participants’ recollections of the intervention 18-months later indicated that they were influenced by the delivery of career information; the intervention facilitated their elaboration of career-related thinking and planning; the intervention provided an important source of social and emotional connection with one another; and participants demonstrated links between their career aspirations and working in rural Australia. This longitudinal study provides additional evidence that intensive career development learning interventions for rural school students may be beneficial for correcting the differential access and participation rates for this demographic group in the Australian higher education system.

Keywords: *vocational planning, career development, rural and remote Australia, higher education, rural students*

International trends in preparing clinical child and adolescent psychologists

Chair(s): ROBERTS, M. (University of Kansas)

This symposium is intended to bring together different perspectives on developments in the training of the clinical child and adolescent psychology specialty field. This area of applied psychology has been growing worldwide in recognition of the immense unmet needs for improving the mental health of children and adolescents. Specialty training at different levels of application draws on evidence-based practice incorporating information from empirically-based assessment and treatment, clinician expertise, and client values. Different approaches are taken accommodating different countries' educational structures and systems for mental health services. This symposium is intended to elucidate new developments and outline the future for specialty applications of clinical child and pediatric psychology worldwide. Presenters will discuss issues of licensure and credentialing faced in the United States, development of psychopharmacology training within psychology, applications and training in evidence-based practice in different countries and cultures, scientist-practitioner training in pediatric (child health) psychology, and Latin American developments for training professionals in applied child psychology. Key Learning Objectives include: describe the international efforts for the training and applied practice in the specialty of clinical child and adolescent psychology; discuss significant issues facing different countries in developing specialty applications to meet the psychological needs of children and adolescents; and prepare for developments in research and applications in the specialty of clinical child and adolescent psychology.

Training for licensing and credentialing in clinical child and adolescent psychology in the United States

ANTON, B. (American Psychological Association)

This presentation will address challenges to licensing and credentialing for the professional preparation of delivery of clinical services by professionals in the specialty of clinical child and adolescent psychology in the United States. Children are seriously underserved in the United States and the scientific knowledge base is evolving. However, there are significant barriers to practice that include licensing challenges and specialty credentialing for early career psychologists. This presentation will analyze the mental health needs of children and adolescents as well as the present state of licensing and credentialing. Implications for international professionals will be discussed.

Keywords: *licensing, credentialing, child and adolescent psychology, United States*

Scientist-practitioner training in clinical child and pediatric psychology: International developments

LA GRECA, A. (University of Miami)

This paper will discuss professional preparation for delivery of evidence-based services by scientist-practitioner professionals in the specialty of pediatric psychology in the United States and other countries. Children are seriously underserved and the scientific knowledge base is developing to meet the needs affecting training. This presentation will analyze mental health needs of children and families as well as the present state of training and education with specificity the child health and pediatric psychology. Advances in the scientific literature and rising needs for qualified professionals in the United States require attention to sequences of predoctoral, internship and postdoctoral training. Implications for international professionalism will be discussed.

Keywords: *scientist-practitioner, pediatric psychology, United States, education, training*

Latin American perspectives on professional training for clinical child and adolescent psychologists

SANCHEZ-SOSA, J.J. (National University of Mexico)

Although Clinical Psychology in Mexico is a well defined and established field, training of clinical psychologists to work in the specific area of children and adolescents still receives input from a variety of professionals. As in other Latin American countries, this specialized clinical work is benefitting from the promotion of research-based practice. Educating all the way from politicians to the public in general on these and other issues is therefore a current priority of Mexican psychologists.

Keywords: *clinical psychology, Mexico, training, children, adolescents*

Clinical psychology training and evidence based practice in Ireland

O'REILLY, G. (University College Dublin)

An over-view of clinical psychology training in Ireland will be presented, emphasising the role of integrating knowledge of theory and research in child clinical practice. In addition the blending of conducting clinically relevant research as a core part of clinical training will be illustrated.

Keywords: *clinical psychology, training, Ireland*

Psychopharmacology applications in clinical child and adolescent psychology and training

BROWN, R. (Temple University Health Sciences Center)

This presentation will provide the latest updates on pediatric psychopharmacology for childhood mental health disorders including the most recent research on the safety and efficacy of many of the commonly used medications. In particular, information will be provided on the use of multimodal therapies including the combination of psychotropic medication and psychotherapy for the management of both the internalizing and externalizing mental health disorders in children and adolescents.

Keywords: *pediatric psychopharmacology, childhood mental health disorders, efficacy, medication, adolescents*

Internationalizing ethics in psychology

Chair(s): GAUTHIER, J. (Laval University)

Discussant(s): ALLAN, A. (Edith Cowan University)

Today, psychologists increasingly work cross-culturally either within their own country or by working in other countries. It takes a conscious effort to understand the implications for psychological practice of the cultural differences that exist. The purpose of this symposium is to discuss the internationalization of ethics in psychology and highlight new developments in the field. The symposium includes four papers presented by four distinguished participants. The first paper focuses on psychological ethics from an international perspective and ways to incorporate a broader ethics perspective into the ethics training curriculum. The second paper provides an overview of formally adopted regional and international ethics documents intended to be applied across national boundaries, and discuss their meaning in terms of the evolution of ethics in psychology. The third paper demonstrates a process for psychologists to consider when using the *Universal Declaration of Ethical Principles for Psychologists* as a guide to creating or reviewing a code of ethics. The fourth paper demonstrates how the Universal Declaration can be used as a resource in ethical decision-making. The symposium also includes concluding remarks from an international perspective by a discussant who is a world-renowned expert in ethics. There will be opportunity for audience members to ask questions of presenters and for an exchange of views.

Internationalizing the ethics training curriculum in North America and beyond

LEACH, M. (University of Louisville)

Ethics training in North American psychology has almost exclusively focused on the APA and CPA codes of ethics, with virtually no mention of other ethical systems, codes, types, and

developments. This presentation will focus on psychological ethics from an international perspective and ways to incorporate a broader ethics perspective into the training curriculum. Recent ethics developments internationally will be presented along with results of ethics codes comparison studies that can be included in research, testing and assessment, and applied coursework. Implications for teaching ethics outside of North America will be included, along with implications for the psychology field itself.

Keywords: *ethics, codes of ethics, training, ethics*

The evolution of codes of ethics for psychologists: Going international

GAUTHIER, J. (Laval University)

Many ethics codes for psychologists have been developed by national psychology organizations. However, psychologists live in a globalizing world where traditional boundaries are fading and, therefore, they increasingly work with persons from diverse cultural backgrounds within their own country or in other countries. It takes a conscious effort to understand the implications for psychology of the cultural differences that exist, especially since most of us have not been nurtured or socialized in the multicultural aspects of today's changing world. This presentation will focus on ethics documents intended to be applied across national boundaries and discuss their meaning in terms of the evolution of ethics in psychology. Ethics documents intended to be applied across national boundaries have been developed and formally adopted by regional (i.e., groups of countries) and international psychological associations. An overview of these documents and the historical context in which they were developed will demonstrate that ethics documents have evolved considerably since the publication of the first code of ethics in psychology in 1953. One major development is that ethics documents in psychology are becoming international. The *Universal Declaration of Ethical Principles for Psychologists* (2008) represents the latest expression of this movement and the largest international effort of psychologists to establish an explicit moral framework of ethical

principles that are based on shared human values across cultures. Another major development in ethics documents is the articulation of a moral ethical framework or philosophical foundation that is not only aspirational, but is clearly demonstrated in all value and standards statement that may follow. Language has changed and definitions and themes have also evolved. Ethics documents tend to reflect concerns of the day and evolve according to changing world conditions. Standards of behaviour have been a major concern in psychology. Over time, ethics codes have included explicit statements of overarching or underlying philosophical moral ethical principles.

Keywords: *ethics, diverse cultural backgrounds, cultural diversity, multicultural, Universal Declaration of Ethical Principles for Psychologists*

Guidelines for using the Universal Declaration of Ethical Principles for Psychologists to create a code of ethics

PETTIFOR, J. L. (University of Calgary)

The *Universal Declaration of Ethical Principles for Psychologists* provides a moral foundation for professional codes of ethics. This presentation demonstrates a process for psychologists to consider when using the Universal Declaration as a guide to creating or reviewing a code of ethics. A careful review of the objectives for having a code of ethics provides direction. Reviewing each of the ethical principles through a cultural lens clarifies the meaning. Wide consultation promotes acceptance. Against this background, psychologists can develop culture-specific standards of behaviour. This process translates universal principles into practical culture-specific standards that honour the differences in the interpretation of culture.

Keywords: *Universal Declaration of Ethical Principles for Psychologists, codes of ethics, ethics, culture-specific, ethical practice*

Using the Universal Declaration of Ethical Principles for Psychologists in ethical decision making

SINCLAIR, C. (The Hincks-Dellcrest Treatment Centre)

Regardless of world location, ethnicity, or type of psychological activity, psychologists are faced daily with ethical questions and dilemmas. This presentation will demonstrate how the *Universal Declaration of Ethical Principles for Psychologists* can be used as a resource in ethical decision making. Vignettes that describe situations requiring difficult choices will be presented. This will be followed by a demonstration of how the principles, values, and basic messages of the *Declaration* could be used to explore the ethical issues in the vignettes, and guide psychologists in their decision making. Reference will be made to different models of ethical decision making, the cultural variability of such models, and the *Universal Declaration's* position in the model spectrum.

Keywords: Universal Declaration of Ethical Principles for Psychologists, ethical decision making, ethical issues, cultural variability, ethical practice

Issues confronting culturally diverse young people and their families: Implications for intervention

Chair(s): XENOS, S. (RMIT University)

In keeping with the theme of the 27th International Congress of Applied Psychology "encompassing global applied psychology", the main focus of this symposium is on the challenges confronting young people of diverse cultural backgrounds and their families and the implications for psychologists in assisting young people confront these challenges. The first paper is presented by Professor Jim Georgas of The National and Kapodistrian University of Athens and examines family values and relationships in Greek families, both in Greece and internationally. The second paper is presented by Sophia Xenos and Carina Coulacoglou from RMIT University and the University of Athens and examines the fairy tale test, a projective personality test for children, with a sample of children in Greece and Australia and explores cross cultural similarities and differences across the two samples. The third paper is presented by Catherine Hughes from RMIT University. Catherine's paper examines self-concept, career maturity, and parenting style with a sample of students in Australia and Thailand, and draws of implications for practitioners working in a cross cultural setting.

The Greek family: Past, present and future

GEORGAS, J. (The National and Kapodistrian University of Athens)

We have considerable knowledge about past families in Greece from historians, philologists, social and behavioral scientists. We know about the relationships between grandparents, parents, children, uncles and aunts, cousins, koumbari and others. We know about the family values, the roles of the men and the

women, the parents and the children, the bonds with relatives and other members of the village. We know about the relationships of the families in the Greek villages, the role of religion and the clergy, the role of the teacher. At the present time, the economic development of Greece during the past 50 years, and particularly since 1980, a number of changes have occurred in the family. Some describe these changes as the crisis of the Greek family, the abandonment of traditional family values, the lack of respect of young people for their elders, the isolation of the nuclear family from their relatives. But recent studies suggest that the family is adapting to the social and economic developments, in which new opportunities for education have played a major role. This paper will describe recent studies from the University of Athens and other research centers about the current family in Greece. These studies have looked at a number of variables related to families. Family networks describe the relationships and communication between family members and relatives. The family values are those traditional values where the father has all the authority in the family, and those values regarding psychological relationships within the family. Three types of family roles of mothers and fathers are emotional support, financial roles, and care of children. How close are the emotional bonds with members of the nuclear family (mother, father and children) and with members of the extended family (grandparents, aunts and uncles, cousins). How much has the Greek family changed? These changes will be described. We will also compare these changes to those occurring in countries throughout the world. The changes in family in Greece are also directly relevant to the Greek families in Australia and other countries to which Greeks have emigrated during the past 100 years.

Keywords: *Greece, relationships, family*

The challenges of implementing a school-wide behavioural resiliency-building intervention with children of refugee and recently arrived migrant backgrounds

ICHLOV, S. (Travancore School, Debney Meadows Primary School, & Carlton Primary School), XENOS, S. (RMIT University)

This project will evaluate the efficacy of the School-Wide Positive Behaviour Support for Engagement and Learning (SWPBS-EL) approach within two inner-Melbourne culturally diverse primary schools, the majority of students who are from refugee or recently-arrived migrant families. SWPBS-EL is a school-wide intervention aimed at improving a school's ability to teach and support positive behaviour for all students. This enables students to achieve important social, emotional, and learning goals, all of which are commonly reported challenges for this particular student cohort. Using a controlled experimental design, the project will compare the academic, behavioural, social, and emotional wellbeing of primary school students across years 1 to 6 before, during, and after their involvement in the intervention across one academic year. It is anticipated that positive outcomes elicited through the project evaluation process will lead to a best practice model of positive behaviour support that can be accessed by other schools. The research model will encompass increased knowledge of the issues and potential challenges experienced by students who are from recently-arrived, refugee, and culturally diverse backgrounds.

Keywords: *refugees, migrant families, schools, students, culturally and linguistically diverse backgrounds*

Adapting Australian instruments for psychological research in Thailand

HUGHES, C. (RMIT University), THOMAS, T. (RMIT University), XENOS, S. (RMIT University), REECE, J. (RMIT University)

This study investigates the validity and cross-cultural equivalence of the Career Development Inventory-Australia (CDI), the Self-Description Questionnaire II (SDQII), and the Parental Bonding Instrument (PBI) for comparison of career maturity, self-concept and parenting style across Australian and Thai cultural contexts. Adopting a universalist theoretical orientation, this study applies Berry's (1969; 1989) model to operationalise emics (culture-specific) and etics (culture-general) in cross-cultural research. The CDI, SDQII, and PBI were transported into a Thai

cultural context as imposed etics. Emic aspects of the three instruments were investigated by: (1) scrutinizing the instruments for suitability for Thailand; (2) forward and back translation; (3) translation field testing; and (4) a quantitative cross-sectional study involving 159 secondary students in Thailand and 218 students in Australia. Participants were administered the CDI, SDQII, and the PBI in their native languages. The reliability, construct validity, and cross-cultural equivalence of each instrument were then assessed to arrive at a derived etic for valid cross-cultural comparisons. Derived etic status was achieved for the Career Planning scale of the CDI, the Care and Overprotection scales of the Mother Form and Father Form of the PBI, and five SDQII scales, including Mathematics, Verbal, Opposite Sex Relations, Same Sex Relations, and Parent Relations. Only these scales of the original instruments are suitable for valid cross-cultural comparison across Australian and Thai cultural contexts. For researchers, this study is an illustration of Berry's (1969; 1989) process for operationalising etics and emics in cross-cultural research to achieve a derived etic. It also highlights the complexities of establishing the equivalence of instruments for use in cross-cultural investigations. For the users of psychological research, the results of this study underscore the need to be critical of the suitability of psychological instruments in multicultural and cross-cultural contexts.

Keywords: cross-cultural, Career Development Inventory, Self-Description Questionnaire II, Parental Bonding Instrument, Thailand

Factors related to psychopathology in the Greek-Cypriot refugee population

THOMAS, T. (RMIT University), COSTA, A. (RMIT University)

Amongst the refugee groups living in Australia, there is very little mention of the Greek-Cypriot population. However, research clearly documents the increased susceptibility of refugees to mental illness. This study aims to identify factors that are related to psychopathology in the Greek-Cypriot refugee population of Victoria. The selected psychological variables are based on Hobfoll's

Conservation of Resources theory and past research with different refugee groups. A total of 53 Greek-Cypriot refugees, including 30 females and 23 males, completed a questionnaire measuring depression, anxiety and insomnia, stress, and general mental health. The results indicate that greater resource loss, lower levels of perceived social support, loss of loved ones through war-related death, the coping style of avoidance, and past experience of physical and emotional trauma impact negatively upon current mental health. Finally, suggestions for future research and the development of appropriate policies and services to serve refugee populations are discussed.

Keywords: Greek-Cypriot refugee population, refugees, coping styles

Keep on running: Benefits of music for exercise and sport

Chair(s): TERRY, P. C. (University of Southern Queensland)

Discussant(s): MORRIS, T. (Victoria University)

Music is frequently used as an accompaniment to exercise and by athletes as part of their preparation for competition. A recent meta-analysis of the extant literature in the exercise and sport domains has identified robust, small-to-moderate benefits of music in the areas of psychological responses, perceived exertion, and physical performance, plus small but significant benefits to physiological functioning. This symposium addresses the scientific basis for music use in exercise and sport, as well as presenting a range of applied examples. A conceptual model will be presented, which identifies the personal and situational variables that influence a range of potential benefits of music. The effects of variables, such as rhythm response, musicality, cultural impact, and associations, are also explained. Paper 1 presents an evaluation of the effects of synchronous music on endurance and feeling states during circuit exercises, which particularly assesses the influence of gender. Paper 2 reports on a study of the influence of familiarity on the arousal and relaxation qualities of music, during imagery use. Paper 3 presents the results of a laboratory investigation of the psychological, physiological and performance benefits of music synchronized to stride rate among elite triathletes. Paper 4 focuses on music applications for athletes, including those that incorporate innovative use of technology. A discussant will provide concluding remarks. There are three learning objectives for this symposium. Following attendance, participants should be able to: 1) explain the scientific underpinnings for music use in exercise and sport; 2) understand the findings of three empirical investigations of music use in exercise and sport; 3) Know the basics of implementing music interventions with exercisers and athletes.

Ergogenic and psychological effects of synchronous music during circuit-type exercise

KARAGEORGHIS, C. I. (Brunel University), PRIEST, D. L. (Brunel University), WILLIAMS, L. (Brunel University), HIRANI, R. M. (Brunel University), LANNON, K. M. (Brunel University), BATES, B. J. (Brunel University)

Researchers have highlighted the human tendency to synchronize movements with the rhythmical elements of music. Recent findings indicate that when synchronized with movement, music improves performance in a range of aerobic and anaerobic tasks (e.g., treadmill walking, cycle ergometry, bench stepping, 400 m running). Women are exposed to dance and choreographed exercise-to-music classes earlier than men and more frequently; however, gender differences pertaining to the potential benefits of synchronous music have seldom been investigated. The main aim of the present study was to investigate the effects of synchronous music on anaerobic endurance and feeling states during a series of circuit-type exercises. A secondary aim was to explore the possible moderating influence of gender. Participants comprised 13 female and 13 male sport sciences undergraduates. Three synchronous conditions were employed (motivational music, motivationally-neutral [oudeterous] music, and a metronome control). Performance was measured using repetitions to failure and post-task affect was assessed using Hardy and Rejeski's (1989) Feeling Scale. The data were analyzed using mixed-model 3 (Condition) x 2 (Gender) ANOVAs, ANCOVAs, and MANOVA. Results indicated that synchronous music did not elicit significant ergogenic or psychological effects in isolation. Rather, significant ($p < .05$) Condition x Gender interaction effects emerged both for total repetitions and mean affect scores. Both women and men produced fewer repetitions in the oudeterous when compared to the motivational condition. Nonetheless, whereas women performed fewest repetitions under the control condition, men performed comparably in the motivational condition. Women and men showed differential affective responses to synchronous music: men experienced more negative feeling states than women in both music conditions. However, the

opposite trend was evident in the control condition. It appears that trained women do not perform better than their male counterparts when synchronous movements are compared. Also, men may be more able to coordinate their movements to a regular beat in the absence of musical stimuli (i.e., a metronome). Therefore, music used for male groups should have high motivational qualities and a particularly prominent beat. Also, practitioners should be particularly sensitive to the affective qualities of music when selecting an accompaniment for women participating in anaerobic exercise.

Keywords: music, synchronize movements, performance, aerobic and anaerobic tasks, gender differences

Quantification of physiological arousal during familiar arousing music, unfamiliar arousing music, and unfamiliar relaxing music during imagery in elite shooters

KUAN, G. (Victoria University), MORRIS, T. (Victoria University), TERRY, P. C. (University of Southern Queensland)

In the current study, we aimed to determine whether arousing music produces higher levels of physiological arousal than relaxing music during sport imagery. This was a precursor to examining the impact on performance of imagery accompanied by music. We examined whether unfamiliar music increased or decreased arousal level during familiar sport imagery. We chose unfamiliar music to minimize confounding effects of past associations. We added familiar arousing music for comparison. 10 elite shooters (7 males, 3 females) performed shooting imagery while we played relaxing music, unfamiliar arousing music, and familiar arousing music. Using a ProComp+ system and BioGraph Software version 5.0 from Thought TechnologiesTM, we monitored blood volume pulse-amplitude (BVPAmplitude), heart rate (HR), galvanic skin response (GSR), and peripheral temperature (PT), for consistent patterns of physiological arousal during each type of music, while participants did sport imagery. All participants listened to nine classical music excerpts, chosen by the researchers, before their normal

training schedule. Three excerpts were played in each of three training sessions. Resting levels of physiological measures were recorded first. Between music excerpts, participants rested until those levels were reached again. Analysis of variance revealed significant changes on GSR, $F_{2,162}=15.35$, $p<.05$, $\eta^2=.16$, BVPAmplitude, $F_{2,162}=10.83$, $p<.05$, $\eta^2=.12$, and HR, $F_{2,162}=24.33$, $p<.05$, $\eta^2=.23$, for different categories of music. There was a significant interaction effect for PT and different categories of music, $F_{16,162}=1.87$, $p<.05$, $\eta^2=.16$. Unfamiliar arousing music created higher arousal levels than familiar arousing music. Relaxing music showed lower levels of arousal compared to other pieces of music. GSR, PT, and HR showed consistent patterns of interpretation for arousal level of music during imagery. BVPAmplitude showed more variable results, which might be due to the highly sensitive measurement of BVP, which could be easily influenced by small amounts of noise. In conclusion, some music may produce greater arousal or relaxation than others. Thus, careful selection of music to be used during imagery rehearsal is important to manipulate arousal level for examining the effect of arousal/relaxation on imagery.

Keywords: physiological arousal, familiar arousing music, unfamiliar arousing music, unfamiliar relaxing music, sport imagery

Effects of synchronous music on treadmill running among elite triathletes

MECOZZI, A. (University of Southern Queensland; Queensland Academy of Sport), TERRY, P. C. (University of Southern Queensland; Queensland Academy of Sport), D'AURIA, S. (Queensland Academy of Sport), KARAGEORGHIS, C. I. (Brunel University)

Research has shown that running in time to music that is synchronized to stride rate can provide significant benefits for sub-elite athletes, although it is uncertain whether such benefits also accrue for elite performers. The present study evaluated the effects of running in time to music on a treadmill using a range of psychological, physiological and performance indices among a sample of elite triathletes. An initial test was conducted to establish aerobic

capacity and individual stride rates at various running speeds. Triathletes were presented with music selections of appropriate tempi for each running speed (i.e., synchronous music), and chose tracks they considered to be (a) motivational, and (b) neutral. They then completed a standardised running test on three occasions in counterbalanced order under three conditions (no-music, motivational music, neutral music). The test protocol involved a warm-up, three 4-minute periods of steady state running at progressively faster velocities, followed by a run-to-exhaustion at approximately 110% of blood lactate threshold. Dietary intake was controlled over the day preceding each test. Measures were taken after each 4-minute period of steady state running and after the run-to-exhaustion for (a) perceived exertion using the Borg Scale; (b) psychological state using the Feeling Scale; (c) oxygen utilization; and (d) blood lactate. Time to exhaustion was recorded and mood responses were assessed prior to and following each test, using the Brunel Mood Scale. Perceived exertion was lower with music than without music even though the same amount of work was completed. Feelings remained more positive throughout the test with motivational music compared to neutral music and no-music. Oxygen consumption was about 3% lower when running in time to music compared to running without music, although blood lactate levels remained almost identical. Compared to the no-music condition, time-to-exhaustion improved by more than 12% when running in time to music. Mood responses were more positive with music. Results confirmed the hypothesized benefits of music but suggested that synchronicity of the music to the activity may be more important in functional terms than the motivational qualities of the music.

Keywords: *synchronous music, treadmill running, elite athletes, performance, motivational qualities*

Music applications for athletes

TERRY, P. C. (University of Southern Queensland)

Empirical and anecdotal evidence of the benefits of music for athletes has grown over the past decade. Michael Phelps, the most successful Olympian of all time, listens to music

until about two minutes before his races start and has attributed part of his phenomenal success to this practice. The aim of this presentation is to demonstrate ways in which the evidence base can be applied in practice. A range of evidence-based music applications for athletes is discussed. First, use of inspirational music is presented, giving examples from bobsled and trap shooting. Secondly, manipulation of pre-competition mindset using music is explained, giving examples from rowing, boxing and athletics. Thirdly, the role of music in rehabilitation from injury is exemplified, based on work with a six-time kayak world champion incapacitated by chronic fatigue syndrome and unable to compete. Fourthly, the incorporation of innovative use of technology to enhance the effects of music is presented and discussed. Brainwave training utilising the flicker response delivered via custom-made glasses to promote alpha wave activity was shown to be an effective mood regulation strategy when used in conjunction with music among shooters at the 2006 Asian Games. Similarly, music used in conjunction with analysis of EEG activity was utilised among shooters preparing for the 2008 Olympic Games. Firstly, individualised links between brain activity and best shots were assessed using on-range EEG analysis, followed by neurofeedback training (NFT) to promote ideal brain activity. Next, music with associations of winning was used during NFT to promote a conditioned response. This music was then used as a pre-task stimulus to promote ideal brain activity during performance. Finally, a recent innovation has incorporated appropriate music, words and photographs into a PowerPoint presentation, converted it into an mp4 file and loaded the presentation onto a mobile phone for viewing by the athlete as and when required. The principles and practice of using music interventions with athletes has been demonstrated and discussed. The evidence-based examples described in this presentation provide a guide for applied sport psychology practitioners to implement music interventions with elite athletes.

Keywords: *inspirational music, athletes, competition, rehabilitation, technology*

KidsMatter: Early childhood services and primary schools mental health initiative

Chair(s): LITTLEFIELD, L. (Australian Psychological Society)

KidsMatter is an Australian mental health promotion, prevention and early intervention initiative specifically developed for early childhood services and primary schools. KidsMatter is informed by the World Health Organization's (1994) Health Promoting Schools Framework, and incorporates primary, secondary and tertiary approaches to prevention and intervention. KidsMatter uses an evidence-based framework focused on risk and protective factors for children's mental health. It aims to improve the mental health and wellbeing of children, reduce mental health difficulties amongst children, and increase support and assistance for children experiencing mental health difficulties. This symposium will provide an overview of the KidsMatter framework and implementation process; report on evaluation findings from the pilot of KidsMatter Primary throughout 2007 and 2008; provide a case study of a school that implemented KidsMatter and update on the broader dissemination of KidsMatter Primary; and outline the adaptation of the KidsMatter initiative for children aged birth to school age.

Overview and implementation of KidsMatter Early Childhood and Primary initiatives

LITTLEFIELD, L. (Australian Psychological Society)

KidsMatter Early Childhood (0-5 years) and KidsMatter Primary (5-13 years) are Australian mental health promotion, prevention and early intervention initiatives specifically developed for early childhood services and primary schools. The KidsMatter Initiative was developed in response to national concern for children's mental health and the need for coordinated and strategic action. KidsMatter

recognises the critical role that early childhood services and primary schools have in enhancing factors that support children's mental health and wellbeing. KidsMatter provides these services with a framework, an implementation process, ongoing implementation support, and evidence-based resources needed to develop strategies to support the specific mental health needs of children. KidsMatter uses an evidence-based framework that aims to strengthen children's mental health by enhancing protective factors and reducing risk factors for poor mental health. KidsMatter is implemented through four key components: creating a positive community; strengthening children's social and emotional competence; providing parenting support and education; and assisting access to early intervention. External evaluation showed KidsMatter Primary to be a successful initiative. KidsMatter Primary is now strengthening partnerships with State/Territory education and health systems to support broader implementation. KidsMatter Early Childhood will be piloted in long-day care centres and preschools during 2010-2011. This presentation will describe the four components, the implementation process and highlight the critical success factors of KidsMatter. The evidence-base underlying the KidsMatter framework and implementation model will also be discussed.

Keywords: *KidsMatter Early Childhood, KidsMatter Primary, primary school, children's mental health*

Upscaling the KidsMatter Primary pilot initiative

TRINDOR, M. (Australian Psychological Society),
LEARY, H. (Benalla Primary School)

Schools are an important setting for population health initiatives aimed at improving children's mental health. Following successful evaluation, initiatives require broader dissemination, or upscaling, within relevant systems. External evaluation showed KidsMatter Primary to be a successful promotion, prevention and early intervention initiative. However, upscaling the KidsMatter Primary pilot presented a unique set of challenges. Crucial to broader implementation was the need to maintain key success factors, particularly implementation

support for schools and professional learning for all school staff. Links between KidsMatter Primary, education sectors, and local health and community agencies also needed to be strengthened. A structure to promote systemic implementation was also developed in the form of Regional Leadership Groups to support KidsMatter schools in a common district. Central to all upscaling considerations was the need to incorporate ongoing monitoring to maintain quality assurance. This presentation will firstly present a school case study to detail the process and benefits of the KidsMatter implementation model. Following this, it will provide an overview of the upscaling of the KidsMatter Primary Initiative after a successful pilot evaluation. The presentation will reflect on models of upscaling developed in the international literature, outline the development of strategies for implementing the KidsMatter Primary initiative more widely, and discuss challenges of upscaling pertaining to adapting service delivery and quality-assurance.

Keywords: *Schools, KidsMatter Primary, children's mental health, school staff*

KidsMatter Primary pilot evaluation: Improving mental health

DIX, K. L. (Flinders University), LAWSON, M. (Flinders University), SKRZYPIEC, G. (Flinders University), ASKELL-WILLIAMS, H. (Flinders University), SPEARS, B. (Flinders University), SLEE, P. (Flinders University)

The broad purpose of the study was to evaluate the effectiveness of KidsMatter Primary and, in particular, the change over time in the mental health and wellbeing of almost 5000 children, in 100 primary schools across Australia. The complex longitudinal study involved the parents or caregivers and teachers of students, who were tracked over two years, with questionnaires completed by informants on four occasions. The questionnaire contained scales that addressed aspects of KMP implementation, the four components, school, family and child protective factors, as well as assessments of mental health difficulties (Goodman's Strengths and Difficulties Questionnaire) and wellbeing (CASEL). In order to assess change

over time that were of statistical and practical significance, Hierarchical Linear Modelling (HLM) provided analytic techniques that were appropriate for large-scale, longitudinal, complex nested data. KMP achieved its major aims to improve student mental health and well-being and reduce mental health difficulties, particularly for those students considered to be in the 'borderline' or 'abnormal' ranges of mental health. KMP achieved a shift for a number of students within the 'borderline' and 'abnormal' ranges, into the 'normal' range, with improvement for as many as 1 in 10 children, depending on how mental health was assessed. KMP had a positive impact on schools, teachers, parents, and children. It facilitated activities around the 4 Components, strengthened protective factors within the school, family and child, and improved student mental health.

Keywords: *KidsMatter Primary, children's mental health, student mental health, schools, parents*

KidsMatter Early Childhood

LAWRENCE, J. (The Australian Psychological Society)

The KidsMatter Early Childhood initiative is an adaption of the KidsMatter Primary initiative for use in long day care and preschool/kindergarten settings. KidsMatter Early Childhood is being piloted in 110 early childhood services throughout Australia in 2010 and 2011. Adapting KidsMatter for children aged birth to school age required consideration of the unique needs of young children, families and early childhood services. This involved revising the materials, content and processes of KidsMatter Primary for a younger age group and different setting, and incorporating what was learnt from the KidsMatter Primary pilot. The adaption also involved incorporating into the framework knowledge of relevant influences on mental health in the first 5 years of life, such as key developmental tasks and milestones, the formation of attachment relationships, and understanding the unique manner in which early childhood services embed social and emotional learning into the daily experiences of young children. This presentation will outline the process of adapting the KidsMatter

Early Childhood initiative. It will detail the changes to the KidsMatter implementation framework relevant to the birth to 5 age range, and discuss unique influences on mental health in this age group. Initial experiences of KidsMatter early childhood services who are participating in the pilot will also be reported.

Keywords: KidsMatter Early Childhood, day care, preschool, children's mental health

Leadership and social identity at work: Practical applications of novel theory

Chair(s): HASLAM, A. (University of Exeter)

Discussant(s): PETERS, K. (University of Exeter)

"The leaders who work most effectively, it seems to me, never say 'I'. And that's not because they have trained themselves not to say 'I'. They don't think 'I'. They think 'team'. They understand their job to be to make the team function.... There is an identification (very often quite unconsciously) with the task and with the group." (Drucker, 1992, p.14). These are the observations of the eminent management theorist Peter Drucker, reflecting on what makes some leaders more successful than others. These ideas are also echoed in the observations of a great many other writers — all of whom recognize that leadership is much more a 'we thing' than an 'I thing'. Yet if one searches for research that might validate his insights or, better still, explain why they are correct, the story is very different. For such research is thin on the ground. What is original about this symposium, then, is that it attempts to do justice to observations like those of Drucker by providing an analysis of leadership in which the terms of the theoretical treatment are matched to the nature of the phenomenon. If leadership really is a 'we thing' (and we believe it is) then we need to understand what this means, where it comes from, and how it works (see Haslam, Reicher & Platow, in press). The aim of this symposium is to provide such an analysis and to demonstrate its utility in relation to important practical problems of leadership in the field. These concern (a) the relationship between pay and organizational performance, (b) the path from leadership to followership, (c) the challenges faced by women in climbing the career ladder, and (d) the dynamics of charismatic leadership. In this, the symposium's learning objectives are both theoretical and applied.

Are we all on the same team?: A longitudinal analysis of the relationship between pay and performance in the university sector

HASLAM, A. (University of Exeter)

Previous research suggests that the salaries of senior managers are a very poor predictor of organizational performance. This makes sense in terms of a social identity analysis which suggests that high executive salaries undermine a sense of shared organizational identity. However, previous studies in this area have been compromised by limited data. This study examines these issues in the context of UK university performance by examining the relationship between university rankings and (a) vice chancellor pay, (b) average staff member pay, and (c) the discrepancy between (a) and (b) over an 11-year period (1998-2009). It was found that: (a) V-C pay is a good predictor of future performance (mean $r = .35$) and (b) performance is a good predictor of future V-C pay (mean $r = .40$); (b) the pay of an average staff member is an extremely good predictor of future performance (mean $r = .64$) and (c) performance is an extremely good predictor of the future pay of an average staff member (mean $r = .59$); (d) the relative difference in pay between the V-C and an average staff member is a good predictor of future under-performance (mean $r = -.32$) but (e) under-performance is a relative weak predictor of the relative future difference in pay between the V-C and an average staff member (mean $r = -.21$). These patterns are consistent with findings from previous experimental work in the social identity tradition (e.g., Haslam, Reicher & Platow in press). This suggests that group performance is highest when all group members (leaders and followers alike) share the rewards of group success. This is because pay sends strong signals about shared identity and this is necessary for leaders to motivate other organizational members to contribute to the collective endeavour, as it is those members' endeavour that ultimately delivers (and is the measure of) group success. Note, though, that these arguments go against the mantra of much of the prevailing "trickle-down" management theory, which suggests that

(highly paid) leaders alone are the key to improved organizational performance.

Keywords: *income, performance, social identity, organisational identity, leadership*

How leadership materializes from followership

JETTEN, J. (University of Queensland)

Two studies tested among natural small groups, who within a group over time, was most likely to emerge as a group leader. We tested whether perceived typicality perceptions within the individual (Time 1) or perceived typicality as defined by the group (i.e. followership at Time 1) was the best predictor of leadership at Time 2. In Study 1, students at a summer school took part twice, with 10 days in between measurement times ($N = 87$, 14 groups). In Study 2, 22 tutorial groups with 4 to 5 psychology students per group ($N = 94$) were approached at the beginning of the academic year and again six months later. In both studies, we assessed normative group and self-ratings, perceived self-prototypicality, followership (i.e. I am doing what others see as normative for my group), and leadership coefficients (i.e. what I see as normative is behaviour demonstrated by my fellow group members). In both studies, we found that self-perceived prototypicality at Time 1 did not predict leadership at Time 2, but we found that followership at Time 1 predicted leadership at Time 2. Our results thus show that those better matching the collectively defined prototype of the group at an early stage of group life developed a greater understanding of how the group is shaped by its members and how the group collectively defines the prototype of the group. Self-prototypicality, formed within the individual in isolation from the group context, did not predict leadership over time. Our results show that those better matching the collectively rather than individually defined prototype of the group at Time 1 develop a greater understanding of how the group is shaped by its members and this led to prototype based leadership. We propose a refined and dynamic model of the antecedents of leadership and highlight the importance of the group

prototype as collectively, interactively and dynamically defined.

Keywords: *leadership, perceptions, group processes, group membership, prototype*

Fitting in or opting out: How perceptions of leadership impact on women's career ambition

RYAN, M. (University of Exeter)

Across almost all high-status careers and high-status positions within organisations women's representation remains stubbornly low. Some commentators argue that this continued under-representation is due to women's lack of career ambition and their tendency to 'opt-out' – either by deciding not to climb the career ladder or by leaving the workplace altogether. This paper seeks to present data which tests between these alternative views. Surveys and experimental data was obtained from the UK police force, UK surgeons, and the Dutch Civil Service. Findings suggest that while gender differences in career ambition are present, such differences are not intrinsic. In particular, evidence demonstrates that, to the extent that women perceive that they do not fit in with leaders in their field, they also express lower levels of career ambition and organisational identification, and a greater desire to opt-out from their jobs (but, not necessarily their careers). By shifting the focus away from the ways in which women are implicated in their own lack of success and on to workplace experiences and perceptions, this research has practical implications for organisations and professional bodies that wish to promote gender equality. Interventions to increase women's fit (and ambition) that are currently underway will be discussed.

Keywords: *career, perceptions, leadership, women, career ambition*

Understanding the basis of leader charisma: The importance of 'doing it for us'

PLATOW, M. (University of Queensland)

In the original Greek, charisma has multiple meanings – including the power to perform

miracles, the ability to make prophecies, and the capacity to influence others. Generally, though, the term is taken to refer to the idea of a leader's 'special gift'. Generally, though, the dynamics of this process are poorly understood. This paper reports data from a number of experiments which manipulate the degree to which a leader (a) is prototypical of a group, (b) speaks on behalf of a group, and (c) is associated with group success and looks at the impact of these on attributions of charisma. These studies are also supplemented by survey data from a number of applied settings. When leaders are in-group prototypical, ratings of their charisma are relatively high, regardless of their rhetorical style. However, when they are in-group non-prototypical, ratings of their charisma were also relatively high if their rhetoric is transformational and emphasizes the collective ('us'). In contrast, when leaders are non-prototypical and couch their messages in transactional terms, they are perceived to be particularly uncharismatic. These patterns are also moderated by the success of the group activity itself. Charisma does indeed appear to be a 'special gift'. However, this is not a gift that they possess, and it is certainly not a characteristic of their personality. Rather, as Platow and colleagues suggest in the title of the paper in which the above two studies were reported, it is a gift that followers bestow on leaders for being representative of 'us'. This is a gift that leaders have to earn by representing and championing the group, not one they are born with and can take for granted.

Keywords: *leadership, charisma, group processes, group success, collective*

Leadership: Understanding its role in a broader organisational context and perspective

Chair(s): WANG, L. (Peking University)

Discussant(s): PENG, K. (University of California at Berkeley)

This symposium centers on leadership style and its relation to variables inside and outside of the occupational fields, including leaders' color preference, customer's satisfaction, and employee's turnover intention, psychological health, and OCB. In the first study, the authors examined the role of subordinate's gender in the relationship between leader's color preference (black or white) and subordinate's perception of leadership style. Based on experiments with 253 participants in 6 organizations, the authors found that leader's color preference did not show a significant effect on subordinate's perception of leadership style. However, gender differences played a moderating role in two of the three dimensions of leadership style: benevolence and morality. The second presentation reports the mechanism and marginal condition in the relationship between transformational leadership and turnover intention. The findings indicate that subordinates vary substantially in the degree to which they embrace transformational leadership and in turn give up turnover intention, and that individual power distance is a significant construct driving these differences. Therefore, the impact of transformational leadership should be carefully assessed with the understanding that it is subject to the influence of individual values. In other words, subordinates value is an important boundary condition for the effectiveness of transformational leadership. The third speaker will present a study on the moderating role of power distance on the relationship between abusive supervision and employees' psychological health. People generally believe that abusive supervision leads to employees' poor psychological health. However, the fundamental values of power held by employees will have an impact on this

relationship. Using 825 Chinese employees, the authors found that abusive supervision had a negative impact on followers' mental health, but this effect emerged only for subordinates lower in power distance orientation. The last presentation will report a multi-level study investigated how leadership styles impact on the relationship between followers' organizational citizen behaviors (OCB) and customers' satisfaction. This study used participative management, charismatic leadership, instructional leadership, amiable humor, and expression of emotion to determine which aspect of leadership has the strongest influence. Among them, charismatic leadership and expression of emotion, as moderators, played a relatively important role such that less charismatic leadership and more emotional expression exhibited stronger positive effects of followers' OCB on customers' satisfaction.

Leader's color preference and subordinate's perception of leadership style: The moderating role of gender differences

YU, K. (Peking University)

Subordinate's perception of leadership style has important practical implications in modern organizations. Researchers have been exploring many factors that could impact it. This study aimed to examine the relationship between leader's color preference (black or white) and subordinate's perception of leadership style, and the moderating effect of subordinate's gender. 253 participants from six organizations were randomly assigned to two groups. Participants in each group read a simple description of a fictitious leader with the same traits (such as intelligent, diligent, deft, etc.) and the leader's color preference of either black or white for each respective group. After this, participants were required to imagine the leader's characteristics and then rate the leader on the 15-item Paternalistic Leadership Scale, which included dimensions of authoritarianism, benevolence, and morality. Results: Results showed that leader's color preference did not show a significant effect on subordinate's perception of leadership style. However, the interaction between color preference and the subjects' gender is

significant in two dimensions of leadership styles. For benevolence, male subjects rated the leader higher on this dimension when the leader liked white ($t = -2.794, p < .01$), while female subjects' judgments were not affected by color preference of the fictitious leader ($t = .895, p > .30$). For morality, male subjects' judgments were not affected by color preference of the fictitious leader ($t = -1.349, p > .15$), whereas female subjects judged the black-preference leader higher in morality ($t = 2.084, p < .05$). For subjects' rating on the leader's authoritarian, the interaction between subject's gender and the leader's color preference fell short of significance ($F = .098, p > .10$). Based on the above results, color preference of the leader was found to be a factor on the subordinate's perception of leadership style, whereas gender differences played a moderating role in two of the three dimensions of leadership style: benevolence and morality. The relationship between leader's color preference and subordinate's perception of leadership style differs among subjects with different gender.

Keywords: *colour preference, perceptions, leadership style, gender differences, authoritarianism*

Transformational leadership influences turnover intention through the mediating effect of interactional justice: The moderating role of power distance

FLETCHER, L. (Vassar College)

It's generally believed that transformational leadership can improve the subordinates' attitude. This study further revealed its mechanism and marginal condition. The authors explored how individuals' values (power distance) influence their responses to transformational leadership and how these responses, in turn, influences turnover intention through the mediating effect of interactional justice. Participants in this study were 825 front-line workers of a large manufacturer in China. We distributed and collected questionnaires on-site in the company, and small gifts were sent to participants through the company's HR department. All questionnaires were filled out in paper-pencil manner. Results showed that

the mediating effect of interactional justice for transformational leadership was significant ($z = -5.64, p < .001$). Transformational leadership was interacted with power distance to affect interactional justice ($\beta = -0.09, p < .05$), and interactional justice was interacted with power distance to affect turnover intention ($\beta = 0.10, p < .05$), that is, the power distance has moderating effect in the first and second stage. Moreover, the simple indirect effect of transformational leadership (through interactional justice) was stronger at low levels of power distance ($\beta = -.303, p < .001$) than at high level of power distance ($\beta = -0.072, p = .0182$). Our findings indicate that subordinates vary substantially in the degree to which they embrace transformational leadership and in turn give up turnover intention, and that individual power distance is a significant construct driving these differences. Therefore, to use transformational leadership style for subordinates, especially for the low power distance individuals, can quickly enhance their interactional justice perception and reduce turnover intention. On the other hand, it should pay more attention to those high in power distance since the transformational leadership may not effectively influence those individuals' interactional justice and turnover intention.

Keywords: *transformational leadership, turnover intention, interactional justice, power distance*

When is abusive supervision not related to employee psychological health? The moderating effect of individual power distance orientation

LIN, W. (Peking University)

People generally believe that abusive supervision leads to employees' poor psychological health. However, this relationship is not always true. The fundamental values of power held by employees will have an impact on this relationship. This study examined how individual power distance orientation (defined as the extent to which an individual accepts the unequal distribution of power in institutions and organizations) affects the relationship between abusive supervision and employees' psychological health. In one

sample, 825 employees from a manufacturing company located in southeastern China rated their power distance orientation, psychological health, and their perceptions of abusive supervision. Results showed that abusive supervision was negatively associated with followers' psychological health ($r = -.199, p < .01$). The relationship between abusive supervision and employees' mental health was moderated by individuals' power distance orientation ($R^2 = .011, \beta = .107, p < .05$), such that this relationship is statistically significant for followers who were lower in individual power distance orientation ($\beta = -.259, p < .01$), but not statistically significant for followers who were higher in individual power distance orientation ($\beta = .085, p = .481$). Abusive supervision has been seen as a significant social problem which would ruin followers' mental health. This study extends previous research by showing that interactive effects of abusive supervision and followers' power distance orientation help explain psychological health among followers. The findings suggest that focusing on fundamental values held by employees contributed to a better understanding of the impact of leader's deviant behaviors. In addition, the interaction of leadership and values followers held in relation to mental condition and employee reactions provide an interesting area that needs further exploration in order to enhance our understanding of when and how leaders affect those they lead.

Keywords: abusive supervision, psychological health, power distance orientation, leadership

Leadership moderators for the relationship of followers' OCB and customer satisfaction - Participative management and leader emotion expression

LI, H. (Peking University)

This multi-level study investigated how leadership styles impact on the relationship between followers' organizational citizen behaviors (OCB) and customers' satisfaction. This study used participative management, charismatic leadership, instructional leadership, amiable humor, and expression of emotion to determine which aspect of

leadership has the strongest influence. Participants represented 96 services teams working in a large telecommunication company, where each team comprised a geographically isolated branch of the company. We investigated 96 unit supervisors and 4 or 5 sales representatives for each supervisor ($n=392$) and two customers for each sales representative ($n=784$). The above mentioned five aspects of leadership, followers' OCB and customers' satisfaction right after service were measured. HLM analysis revealed that the effect of followers' OCB on customer satisfaction was moderated by participative management ($\beta = -6.16, p < .01$), charismatic leadership ($\beta = 0.23, p < .05$), instructional leadership ($\beta = -7.76, p < .01$), amiable humor ($\beta = -6.93, p < .01$), and expression of emotion ($\beta = -5.78, p < .01$). However, step-wise regression analysis demonstrated that the interaction between OCB and charismatic leadership was the largest (explaining 31% of the variance of customers' satisfaction). After controlling for this interaction, only leaders' expression of emotion with customers' satisfaction reached statistical significance. When both of these interactions were controlled participative management, instructional leadership and amiable humor no longer interacted with followers' OCB. Based on the obtained results, several leadership aspects had moderating effects on the relationship between followers' OCB and customers' satisfaction right after service. However, among them, charismatic leadership and expression of emotion, as moderators, played a relatively important role such that less charismatic leadership and more emotional expression exhibited stronger positive effects of followers' OCB on customers' satisfaction.

Keywords: leadership styles, customer satisfaction, emotion expression, organisational citizen behaviors, charismatic leadership

Life designing: A paradigm for career construction in the 21st century

Chair(s): VAN ESBROECK, R. (Vrije Universiteit Brussel)

Discussant(s): MAREE, K. (University of Pretoria)

The post-modern world is characterized by globalization and unpredictable fast changes. This puts heavy demands on the existing career theories and guidance techniques. The present theories are, however, rooted in a modern world characterized by stability, and by predictable and slow changes. Because of this situation, there is now, within the career guidance field, a strong demand for a new and adapted approach. A group of international scholars, who are strongly involved in the guidance and counseling practice, are proposing a new paradigm to respond to these new demands. They no longer speak about “career development” or “vocational guidance”, but concentrate on “life trajectories” and “construction” in which the individuals design their own lives including their work career. The main question is no longer which career shall I choose, but what am I going to make of my life? This approach has far-reaching consequences on career interventions, which should be refocused. Also, career counseling needs to be restructured and the co-evolution of the individual, the economy and society recognized. This will require new basic suppositions and a new framework. Counselors and other guidance workers will need more flexibility with regard to their aims, instruments and “where” they conduct their support. The presenters will, within the scope of this symposium, tackle the different issues and sketch a framework to highlight their position. The learning objectives of this symposium are to (1) Develop an awareness of the need for new paradigms in the 21st century, (2) Recognize that work role is part of a broader set of life-roles, and (3) Learn about a new counseling method and its implication for practice and training.

Life designing: Framework and introduction

SAVICKAS, M. (Northeastern Ohio Universities College of Medicine)

In the 21st century, a new social arrangement of work poses a series of challenges to scholars who aim to help people develop their working lives. The theory of career construction and its life-designing counseling model endorse five presuppositions about people and their work lives: contextual possibilities, dynamic processes, non-linear progression, multiple perspectives, and personal patterns. Thinking from these five presuppositions, the life design international research team has crafted a contextualized model based on the epistemology of social constructionism, particularly recognizing that an individual's knowledge and identity are the product of social interaction and that meaning is co-constructed through discourse. The life-design framework for counseling implements the theories of self-constructing (Guichard, 2005) and career construction (Savickas, 2005) that describe vocational behavior and its development. Thus, the framework is structured to be life-long, holistic, contextual, and preventive. The life-design framework for counseling interventions aims to increase clients' adaptability, narratability, activity, and intentionality. The life-designing model assists individuals to formulate adaptive responses to developmental tasks, vocational traumas, and occupational transitions. In addition to fostering adaptability, the interventions seek to increase clients' narrative competence in telling an autobiographical story that portrays their career and life with coherence and continuity. The story should enable clients to better understand their own life themes, vocational personality, and adaptability resources. In addition to enhancing narratability, activity must be exercised to produce significant changes in “conclusions” of the life stories of many people and in particular of those that seem already written. Thus, life-designing interventions encourage clients to engage in activities in the different domains of life. By engaging in diverse activities, individuals learn which abilities and interests they prefer to exercise. Action is central to life-

designing interventions thinking because it involves behavior plus meaning. The meaning may arise from prospective aspiration or retrospective reflection. Either way, the intentional process is central to the tasks of designing a life and constructing a career. In sum, life-designing interventions foster development through adaptability, narratability, intentionality, and action.

Keywords: *career construction, vocational guidance, life-designing, transition, social constructionism*

The role of the theory of career construction and self-constructing in life-designing

GUICHARD, J. (Institut National d'Etudes du Travail et d'Orientation Professionnelle)

The aim of this study is to outline a theoretical framework for life-designing interventions. Two similar models will be summarised: The Career Construction Model and the Self-Constructing Model. Both of these models refer to the epistemology of social constructionism and assert that (a) an individual's knowledge and identity are the product of social and cognitive processes taking place in context of interactions between people and groups as well as negotiation between them, and (b) the meaning an individual gives to reality is co-constructed in a social, historical and cultural context through the discourse with which we form our relationships. Their difference lies in that the Career Construction Model puts a greater emphasis on career construction and the Self-Constructing Model emphasises identities construction. Career Construction theory describes career as a moving perspective that imposes personal meaning on past memories, present experiences, and future aspirations by patterning them into an evolving life theme. It is the meaning contained in these biographical themes that will equip individuals to adapt to the social changes that are playing out in their work lives. Self-constructing approach shares this view but understands career construction as only one element in identities construction. It considers career as an occupational "subjective identity form" (SIF), as a piece of a broader structure. A SIF denotes a set of ways

of being, acting, and interacting in terms of a certain view of oneself in a given context (past, present or future). "Identity" is seen as plural and evolving: It is described as a dynamic system of subjective identity forms, in which some of them (often the occupational one) plays a core role. These models constitute two perspectives on the life designing issue. Career construction sees it as a major question addressed to individuals: What is the meaning of my career in my life? Self-construction would formulate it this way: What in my life (could) give it a meaning to me? These models are complementary. Perhaps the first question is more likely to be the one of mature adults and the second one that of adolescents or emerging adults.

Keywords: *life-designing, career construction, self-constructing model, cognitive processes, career*

Restructuring career counseling: objectives and instruments

DUARTE, M. E. (University of Lisbon)

The life-design framework for counseling aims to face counseling as a process of continuous interactions, which helps in the resolution of problems, which places the process of decision making within a systematic and realistic frame, and which allows the conjunction of the necessities of individuals with those of the contexts they act, develop and live. Thus, the framework is structured to be life-long, holistic, contextual, and preventive. From theory we will use intervention methods and techniques: the development of self-knowledge and ecological variables, facilitating or inhibiting in decision making processes. The stories and activities developed by individuals are the focal point concerning methodological aspects instead of utilization of test scores or profile interpretations. The existing techniques and tools are reconfigured for use in a social constructionist approach. The presentation and discussion of a case study following the outline of the life-design career counseling illustrates this new way to face career counseling. The international life-design research group has set several projects for the development of life-design intervention model. Some of these projects are presented.

Keywords: *life-design intervention model, decision making, social constructionist approach, career counselling, counselling*

Training practitioners for life-designing

NOTA, L. (University of Padova), SORESIS, S. (University of Padova)

Huge challenges confront vocational guidance in the 21st century. Practitioners must be ready to deal with them if they are to succeed in supporting and helping those individuals who risk making inadequate choices or having unsatisfactory prospects. In order for counselors to pursue significant aims, their training must be carefully planned and assessed. Emphasis would be placed on (a) future counselors' active participation during their training, (b) reduction of the gap existing between the world of research and that of training and application, (c) ensuring that graduates model what they will advocate, and (d) preparing counselors for collaborative projects (Savickas et al., under review). Fifty career counselors and career service providers (mean age 40 years; 40% male and 60% female) were involved in this study. They had a degree in different subjects (education, humanities, economics but mostly in psychology) and worked in diverse contexts (vocational guidance centers, school services, private practice). They reported a range of one to 15 years of experience in providing career service. All participants completed a battery of measures, to assess professional self-efficacy, professional goals and satisfaction, and an open-ended questionnaire that examined their beliefs regarding vocational guidance, before and after the training. The training had been planned based on the points outlined above and special emphasis had been placed on the issues of the Life-design model. It consisted of 120 hours, with 8-hour sessions every two weeks, over a period of 8 months. The analyses carried out show that, after the intervention, the practitioners showed higher levels of professional self-efficacy beliefs, more specific professional goals, and higher levels of satisfaction. Moreover, they tended to consider vocational guidance as a "discipline of change" and counselors as change agents rather than professionals that deal mainly with diagnoses, or with more or less accurate

predictions. These results will be discussed in light of our conviction that counselors themselves should show clear identity and strong adaptability; they should emerge from training as proactive, self-determined professionals with high levels of self-efficacy for performing their professional duties.

Keywords: *vocational guidance, training, career counselor, life-design model, self-efficacy*

Managing challenging behaviours in dementia

Chair(s): BIRD, M. (NSW Greater Southern Area Health; ANU)

Challenging behaviour associated with dementia includes phenomena such as violence or verbal aggression, screaming or yelling, sexual disinhibition, dangerous wandering and a host of other behaviours. It is a major source of distress for home carers and therefore a common reason for admission to permanent residential care, where behaviours tend to be even more florid and cause equivalent distress to nursing home staff. The most common treatment remains prescription of antipsychotics, despite two decades of meta-analyses showing that they are marginally effective at best and have dangerous side effects. Each speaker will illustrate different aspects of this complex work. Delegates will understand more about the phenomenology of this problem, the multi-faceted nature of management, and how clinical psychologists with the requisite skills, knowledge and flexibility can make a major contribution to improving care of these patients and improving life for those who care for them.

What is challenging behaviour and how should it be approached

BIRD, M. (NSW Greater Southern Area Health; ANU)

The aim of this paper is to introduce the nature of challenging behaviour in dementia, and the rationale for the hypothesis-testing case-specific approach which has been used in all successful psychosocial treatment trials, most of them led by clinical psychologists. A case study and evidence from the literature will be presented to illustrate the multi-faceted nature of these problems, in particular the multiple potential causal factors that can lead not only to the behaviour but also to any given behaviour causing sufficient distress to carers or care staff to become a clinical case. Causes of behaviour include factors intrinsic to the

person with dementia, for example pain, delirium or past history and external factors such as the way care is carried out, or features of the physical or sensory environment. These vary widely case to case. The level of staff or home carer distress also varies widely and is dependent upon factors such as attitude to the person with dementia, level of knowledge about dementia or about the patient, care skills, or how much practical or emotional support is available. Accordingly, each case is different, and the role of the clinician is to assess which causal factors apply – often in collaboration with other disciplines, determine which of them is remediable, devise a realistic intervention package and, equally devise a means to maximize compliance with the plan given that it often requires carers to change their behaviour.

Keywords: *dementia, case study, caregivers, challenging behaviour, care staff*

Case studies in residential care

HUDGSON, C. (Deakin University and Eastern Health, Victoria), DAVISON, T. (Deakin University and Eastern Health, Victoria)

The aim of this paper is to illustrate in detail the nature of clinical work both people with dementia who manifest challenging behaviour, and those who care for them. Cases will be chosen which illustrate various facets of the role of the clinical psychologist with this population, including detailed assessment, the range skills and knowledge required – including areas well beyond the normal requirements of clinical psychology, and working with nursing and care staff, and with specialist medical practitioners. These cases will also illustrate the heterogeneous nature of the population outlined in Paper 1.

Keywords: *dementia, challenging behaviour, assessment, clinical psychology, care staff*

Support and training of caregivers: A critical review and implications for clinicians

TURNER, J. (Sydney University), MATTHEWS, M. (Sydney University)

Those who provide care to older adults with dementia, whether family/home carers or institutional staff in residential facilities, often experience stress and depression, and feel burdened by their responsibilities. The aim of this paper is to provide a brief review of the history of the caregiving literature, followed by a review of the more recent literature and current research related to supporting and/or training caregivers of older adults with dementia. Based on the review this paper will offer recommendations for clinicians interested in providing assistance to institutional care staff or family carers in managing older people with dementia. The method involved reviewing research articles published in the last 25 years (since 1985) that: included caregivers of older adults with dementia (> 64 years), provided a direct measure of caregiver behaviour (of either family/home or institutional carers), and/or the care recipient behaviour, and provided a clear description of environmental or psychosocial intervention procedures. Articles meeting criteria fell into a number of categories including: psycho-educational and/or skill-building group classes for family carers; in-service training programmes on the psychosocial management of behaviour disturbance for residential care staff; brief training of staff in the use of specific behavioural procedures; and an integrative approach of didactic and experiential learning methods, including a supervision and mentorship component for care staff. A minority of studies that report benefits of interventions for carers provide objective evidence, and of those, very few also assess outcomes for the dementia sufferer. Positive results are reported for programmes that are proactive in directly training carers in specific management techniques, and for approaches that address the emotional states and attitude of care staff. The implications for clinicians working with caregivers are discussed.

Keywords: *dementia, caregivers, older people, care staff, family carers*

Nearly every intervention in residential care requires at least some change in the behaviour of care staff, some of whom may be demoralized, some cynical, some of low education, some speaking limited English, many paid very low wages, and all of whom will be very busy. The aim of this discussion is for each panelist to talk about some of the problems they have faced in obtaining compliance with interventions, and how they go about maximizing the chances that interventions will be carried out.

Keywords: *residential care, care staff*

Maximising compliance with interventions in residential care (Panel discussion)

Measures to aging in Japan

Chair(s): RENGE, K. (Tezukayama University), PRIBYL, C. (Otsuma Women's University)

Discussant(s): KASHIMA, Y. (Melbourne University), KAKIMOTO, Y. (Jissen Women's University)

Japanese Association of Applied Psychology has held invited symposiums relating to social problems and the contributions of applied psychology in Japan at the last two ICAP in Athens and in Singapore. This symposium will focus on explaining social problems by aging as well as on discussing measures to aging in Japan in order to tackle the impact of ageing on society in the world, because Japan is surely one of the most developing countries of aging, and as a result various measures have been executed. Social problems of elderly people, such as 1) supports in communities, 2) road safety, 3) aging in city and in country, and 4) health, are explained and discussed in the symposium. An American and a Japanese chairperson will moderate the symposium. Two discussants from Japan and from Australia will also join to the discussion. The symposium surely leads to bring better understanding of aging society and the measures to it for the participants from all over the world. The key learning outcomes are: (1) to increase the awareness of researchers of a variety of the social impacts of aging, (2) to introduce measures against negative influences of aging to society, (3) to encourage practical experts to tackle the measures of ageing in the world, and (4) to communicate with researchers and experts in the world to make better measures.

The characteristics of psychosocial problems for the elderly in Japan

NAKAO, H. (Kyushu University)

The purpose of this oral presentation is to show evidence of the characteristics of psychosocial problems for the elderly in Japan. The first of these is the activities for the formal social group for the healthy elderly called the "Rogin Club", which was supported by the

Japan Government from 1962. About 30% of the population over the ages of sixty years participates in the group in order to obtain the "IKIGAI" (corresponding to the meaning of life) which is the biggest social group for the community-dwelling elderly in Japan. The second piece of evidence is the consciousness of supporting older parents, as mentioned by both the elderly and young adults. The differences of the ideas concerning the relationships between the supporters and the dependents in the families mentioned by both the young and elderly people among Japan and China will be discussed on the basis of the larger cross-cultural study in 2006 and 2008. The third of piece of evidence is the psychological problems of the formal care insurance system for the frail elderly which started from 2000 in Japan as the second earliest country followed by Germany. The present condition and the further problems of this institution will be discussed.

Keywords: *psychosocial problems, elderly, Japan, group, community*

Elderly people's road safety in Japan

MATSUURA, T. (Jissen Women's University)

Older people aged 65 and over account for 45% of the road accident deaths in Japan, which is about twice as high as that of other industrialized countries. Fatal accidents for older people often occur when they are pedestrians and cyclists followed by drivers. We present a typical accident by older pedestrians (i.e., disregarding traffic signals) and by older drivers (i.e., failure to stop at the intersection). The reasons for the accidents are shown in terms of traffic environments and functional deficits of older people. Finally, some countermeasures for preventing road accidents and for accomplishing mobility of older people are introduced. They include new driver educational methods and efforts by local government for mobility of older citizens.

Keywords: *older people, road accidents, traffic environment, mobility, Japan*

The places where the percentage of the aged is very high: In the big city and the country

NAITO, T. (Shinshu University)

The percentage of the aged is high in Japan and the proportion of older people fluctuates between places. The places where approximately 50% or more of residents are more than 65 years old exist not only in farming, mountain and fishing villages, but also in urban areas. In general, the high ratio of the elderly causes economical and cultural declining in the community and difficulties for residents in their everyday life. The community of the highest ratio of the old disappears in the future. The main reasons of the high ratio of the aged are economy in the provinces, but administration in the cities. We report actual situations about places of the high percentage of the elderly in the big city and the country and success stories for activating the places.

Keywords: elderly, community, economy, residents, Japan

An anxiety of the nursing care of an aging society

YAGUCHI, K. (Tokai University)

Due to aging, illness and disabilities arise among the elderly. At present, a long-term hospitalization is difficult for older adults and special nursing homes for aged are fully occupied. When families are not able to maintain quality of care at home, elderly cannot remain with their families without any anxiety, even public-care insurance covers the cost of nursing home services. In Japan because of the number of older adults are growing so fast than the supply of medical and nursing support systems, most of the elderly are feeling anxious in many ways. In particular, the suicide rate of elderly females is the highest in advanced nations (G7). Although, they want to feel relieved by living with their families at home, they are depressed by their health problems and are more likely to be isolated. In such a sense, collapse of the family system seems to have a large impact on suicide rate of elderly females.

Keywords: aging, older people, nursing home, suicide, Japan

Mechanisms in the development and remediation of anxiety and novel interventions in anxiety disorders

Chair(s): CLARKE, P. (Brain and Mind Research Institute, University of Sydney)

This symposium combines researchers investigating the mechanisms of cognitive biases implicated in the development and maintenance of anxiety pathology with those examining new and innovative methods of treating of anxiety disorders. Recent advances in cognitive technologies have permitted significant progress in understanding the nature of cognitive biases of individuals vulnerable to anxious mood. The first and second speakers in this symposium report on the use of novel methodologies to examine cognitive biases in individuals with anxiety disorders, and how the pattern of both cognitive and physiological markers of anxiety change over the course of treatment. They highlight how these new paradigms inform understanding of the development, maintenance, and remediation of cognitive biases in anxiety. The second and third speakers in the symposium then discuss the use of novel cost-effective interventions for anxiety disorders. Both highlight how innovative combinations of traditional therapy approaches with new technologies and medications can potentially enhance service delivery and treatment outcomes to clients suffering anxiety disorders.

Distinguishing the attentional basis of positive and negative affectivity

GRAFTON, B. (University of Western Australia)

It is now well established that individuals suffering from clinical anxiety and depression display an attentional bias that operates to favour the processing of emotionally negative information (c.f. Mathews & MacLeod, 2005). However, some variations in the patterns of

attentional selectivity associated with these disorders are suggested. A possible explanation for this common, yet distinctive, pattern of attentional selectivity may lie in the differing contributions made by positive affectivity (PA), and negative affectivity (NA), to these disorders (e.g. Clark & Watson, 1991). That is, if distinctive patterns of attentional selectivity underpin these dimensions of affectivity, then the nature of the attentional biases observed in these disorders will have both common and distinctive features. Therefore, we investigated the patterns of attentional selectivity that characterise PA and NA in a manner that tested two alternative hypotheses: (1) content hypothesis: the differences in attentional selectivity associated with PA and NA reflect the types of material for which attentional bias is evidenced (e.g. positive vs. negative material); and (2) mechanism hypothesis: the differences in attentional selectivity associated with PA and NA reflect differences in the mechanisms that underpin the patterns of attentional selectivity (e.g. biased attentional engagement vs. disengagement). We employed a novel variant of the Attentional Probe task (MacLeod, Mathews & Tata, 1986) that introduced two sequential stages into every trial, requiring participants to first allocate their attention to an initial location, and, subsequently, move their attention to a second location. The task was rendered sensitive to the assessment of biased attentional engagement vs. disengagement, with differing classes of emotional information, through the systematic manipulation of the emotional valence of material (e.g. positive vs. negative) in the attended loci. The results provide support for both hypotheses; specifically, the patterns of attentional selectivity associated with PA differ from those associated with NA, in terms of both the content of the stimulus materials, and attentional mechanisms, implicated in these biases. The potential capacity of these findings to inform our understanding of emotional dysfunction, and the ways in which this new understanding can be therapeutically exploited within cognitive training regimes, will be discussed.

Keywords: *anxiety, depression, attentional bias, negative affectivity, positive affectivity*

Establishing attentional and physiological indicators of treatment response and maintenance of gains in individuals undergoing CBT for Social Anxiety Disorder

CLARKE, P. (Brain and Mind Research Institute, University of Sydney)

Theoretical models and empirical research strongly implicate the role of selective attention to threatening information and physiological arousal in the development and maintenance of Social Anxiety Disorder (SAD). However, relatively little research has been focused on the relationship between attentional and physiological mechanisms and the recovery from social anxiety. The present research assessed changes in selective attention for threat, and physiological measures including cortisol and startle response, in individuals completing a group based cognitive behavioural therapy (CBT) program for SAD. The key aim of this research was to establish which of these measures provide stable indicators of anxiety vulnerability, which respond to treatment and those that are predictive of relapse. Measure of existing attentional bias, and the ease with which a threat bias can be experimentally evoked, were obtained using a modified attentional probe task and a novel eye-tracking paradigm prior to, and following the completion of an 8 week CBT program. Salivary cortisol and startle response were also taken both prior to the commencement of therapy and at the completion of therapy. Preliminary results obtained from this research concerning the degree of change in attentional and physiological measures, the capacity of these measures to predict treatment outcome and the stability of treatment gains will be described in detail. The implications of these findings for theoretical models of SAD are discussed in addition to the potential applied value in identifying those individuals most likely to respond to treatment and the utility of including measures of selective attention and physiological arousal as predictors of potential treatment gains.

Keywords: *selective attention, threatening information, physiological arousal, social anxiety disorder, cognitive behavioural therapy*

D-Cycloserine as an adjunct to Cognitive-Behaviour Therapy to enhance treatment outcomes for Social Anxiety Disorder

GUASTELLA, A. (Brain and Mind Research Institute, University of Sydney)

Recent advances in the neurobiology of fear-extinction have led to the development of novel medications that are believed to enhance learning for overcoming fear during exposure based techniques. This research has shown that one of these medications, a simple antibiotic d-Cycloserine, enhances treatment outcomes for exposure therapy when used as an adjunct to treat social anxiety disorder. It is yet to be determined, however, whether d-Cycloserine facilitates more comprehensive treatment programs for social anxiety disorder, such as Cognitive-Behaviour Therapy. 60 social anxiety patients have been assigned to receive DCS or a placebo immediately before the exposure based components of Cognitive-Behaviour Therapy. Participants were treated with this medication and a group-based cognitive behaviour therapy treatment package. Participants also completed pre, post and long-term follow-up diagnostic and self-report assessments for social anxiety disorder. Results available at the time of presentation will be presented demonstrating the effect of d-Cycloserine on Cognitive-Behaviour Therapy treatment outcomes for Social Anxiety Disorder. Results will be discussed in relation to the development of a brief, safe, and effective adjunctive treatment to improve the quality and effectiveness of Cognitive-Behaviour Therapy for Social Anxiety Disorder. There will also be some discussion of mechanisms of action and patient matching.

Keywords: fear-extinction, d-Cycloserine, exposure therapy, social anxiety disorder, cognitive behavioural therapy

Can Generalised Anxiety Disorder be treated using e-health interventions?

EAGLESTON, C. (Brain and Mind Research Institute, University of Sydney)

Web-based interventions are easily implemented, cost effective and are able to be used simultaneously by many individuals.

However, very little is known about the effectiveness of web-based interventions for Generalised Anxiety Disorder. In a clinical setting, their effectiveness needs to be evaluated against gold standard interventions such as the administration of antidepressant medication, and against credible control conditions. The current trial aims to compare the effectiveness of a web-based program (e-couch), the use of sertraline, and an attention control placebo condition. Community referred young adults, 18-30 years old, who meet clinical diagnosis for GAD are involved in a 10-week intervention comparing the effectiveness of online cognitive behavioural therapy (CBT) with the antidepressant sertraline and an attention control placebo (Health Watch website). Individuals in all groups will receive matched contact with health professionals and general practitioners. Preliminary results describing changes in symptoms and rates of GAD diagnosis will be reported as a function of group membership. The findings will be discussed with respect to models of the delivery of early intervention services, the practicality of services using web methods, and the use of both traditional and non-traditional models in stepped care and clinic practices.

Keywords: web-based interventions, generalised anxiety disorder, sertraline, cognitive behavioural therapy, group membership

Men and vulnerability: Cultural and societal expectations about weakness and strength

Chair(s): CRONAN, K. (Professional Consulting and Counselling Centre)

Discussant(s): CRONAN, K. (Professional Consulting and Counselling Centre)

Despite decades of government sponsored health promotion campaigns highlighting gender as a key determinant of health, men suffer poorer outcomes on almost every measure of health status in comparison to women. The dominant gender role expectation for Western men typically dictates rigid and constricting notions of stoicism, toughness, and fear of self-disclosure. Such expectations contribute to a prevailing avoidance of vulnerability which entails long term psychosocial consequences for men - inhibiting the formation of intimate relationships with other males, and significantly contributing to delayed help seeking for physical or emotional complaints. Five papers are presented in this symposium exploring the clinical and cultural implications of men's intolerance of vulnerability. The first paper declares a reconceptualisation of homophobia as a fear of emotional vulnerability between men, and calls for a new research agenda to understand the emotional impoverishment inherent in many men's relationships due to unhealthy expressions of masculinity. An empirical paper then explores men's vulnerability to socially prescribed body image pressures and its impacts, considering the roles of sexuality and homophobia. Next, research is presented on men's adherence to traditional gender role ideals, and the relationship between transgressions of such ideals and harmful alcohol consumption. Following this, a review paper will synthesise recent findings on violence and abuse directed toward men by female perpetrators, considering men's disadvantage in emotional literacy, and social and professional support systems. Finally, empirical data will be presented on atypical depressive symptom presentation in a sample of male truck drivers, exploring issues

in the assessment of depression for men who avoid both self-disclosure and vulnerability. Attendees can expect to gain an understanding of current issues in research related to the psychology of men within the clinical context. Presentations will draw on the impact of socialisation processes and gender role expectations in fostering the avoidance of vulnerability and the interaction of masculinity with perceived and actual societal expectations. Presenters will give special attention to issues related to clinical assessment and intervention, and recommendations for future research and policy.

Reconceptualising homophobia as a fear of emotional vulnerability between men

MCKELLEY, R. (University of Wisconsin-La Crosse)

Although the construct of homophobia is widely used in research literature and clinical practice, there remains great variation in its meanings and outcomes. One of the modern conventions suggests the term "homophobia" refers to a fear relating to homosexuality, particularly men's fear of intimate or sexual relations with each other. Interestingly, relevant literature about other cultures does not report similar attitudes to this modern Western phenomenon. For example, touch among men in some Asian, Arabic, African, and Islander cultures does not imply the same taboo attitudes. However, conceptualising homophobia as a fear of sexual contact with men limits its therapeutic usefulness. Instead, the construct is more useful if broadly considered as a general fear of emotional vulnerability between men. We will explore the genesis of this emotional impoverishment of masculinity and the impact it has on several dimensions of male development and relationships. Selected case material from individual and group therapy with men spanning over 30 years of clinical work in Australia and the United States will be presented. Particular focus will be on links between fear of emotional vulnerability with other men, early cultural and familial prohibitions against such vulnerability, and implications on men's relationships and psychosocial development. Finally, clinical guidelines to help clients overcome fears of

vulnerability are included. Men in many Western cultures experience an emotional impoverishment that stems from culturally formulated inhibitions around gender, often beginning in infancy and perpetuated by families and societies. These culturally formulated inhibitions on emotional intimacy influence most males throughout their lives in terms of their emotional growth and their ability to experience freedom in tenderness, vulnerability, and depth of friendship as well as relationships, both heterosexual and homosexual. The culturally derived fear of close male relationships, reinforced by cultural attitudes in their lifespan, can leave Western men – and maybe men of other cultures – with unfulfilling relationships if left unchallenged. Reconceptualising homophobia as a deep and pervasive fear of intimacy with men has the potential to help focus the desired therapeutic change needed to help male clients develop richer and more fulfilling relationships and personal lives.

Keywords: *homophobia, homosexuality, Western cultures, emotional vulnerability, masculinity*

Men's body image experiences: What are the roles of sexuality and homophobia?

GREENTREE, S. (PsychSessions)

Body image has long been considered a female issue, with men thought to be free from the appearance pressures women have faced for decades. However, it is ever more apparent that this same pressure is now being felt by men; to achieve the perceived body beautiful. Few studies have directly compared gay and straight men in relation to body image, or considered the impact of homophobia. This study aimed to compare gay and straight men in relation to a range of body image measures designed specifically for men, and explore the role of homophobia and internalised homophobia. Participants (110 straight men, 72 gay men) were recruited from undergraduate psychology courses and from a range of community groups. They were required to complete a questionnaire measuring masculine body ideal distress, drive for muscularity, objectified body consciousness, reasons for exercise, attitudes toward homosexuality and internalised

homophobia (homosexual men only). It was found that gay and straight men did not significantly differ on any of the body image measures and there were no significant relationships between the body image measures with the homophobia/internalised homophobia measures. For all participants, levels of masculine body ideal distress were predicted by objectified body consciousness factors and exercising to improve health and fitness; and levels of drive for muscularity were predicted by exercising for health and fitness reasons only. The overall findings suggest, as has been found with women, that men are vulnerable to the pressures of the media and society at large in the development of an idealised male body type, and specifically, some men will experience distress when this ideal is not met. It also indicates that the experiences of gay and straight men may not significantly differ. However, it cannot be said that these two groups are the same, and it is possible that there are different explanations for why the two groups experience masculine body ideal distress and drive for muscularity. Further research is required to explore these possible differences to increase our understanding and inform in the development of education and intervention programs.

Keywords: *body image, sexuality, homophobia, idealised male body type, muscularity*

Real men drink alcohol: The endorsement of traditional masculinity as a contributing factor in men's alcohol misuse

CUTHBERT, S. (Australian Catholic University)

Alcohol is the most widely used and misused drug in Australia. Consuming alcohol has long been regarded as a functional pattern of behaviour that contributes to social cohesiveness and bonding. General population surveys show that men abstain less often, drink more alcohol, are less mindful of recommended daily limits for consumption, and cause more problems by their drinking. Aspects of traditional masculinity are an often cited consideration in explaining men's alcohol misuse. This study examined dimensions of the traditional male gender role, as explicated by Pleck's Gender Role Strain Paradigm, and their

relationship to forms of excessive drinking, for Australian males aged eighteen to fifty-nine years. 343 men completed an online questionnaire that included measures of alcohol misuse, masculine ideology, and masculine gender role stress. Outcomes showed that greater endorsement of masculine ideology, or one's cognitive belief-set about what represents appropriate masculine behaviour, predicted more binge drinking, higher hazardous consumption, and greater symptoms of alcohol dependence. Increased gender role stress, or the cognitive appraisal of transgressions of traditional male gender role norms as stressful or threatening, predicted greater harmful alcohol use. A significant interaction effect was also found, whereby greater gender role stress predicted more harmful use, and symptoms of dependence, as a function of higher masculine ideology. In addition, differences in the male gender role variables, and the patterns of excessive drinking were found between two age groups: young adult men, and adult men. When compared to older males, young adult men more readily endorsed masculine ideology, appraised deviations from of masculine-typed responses as more stressful, and reported more excessive drinking across all forms of alcohol misuse. Results suggest that beliefs about what represents appropriate masculine behaviour and departures from this behavior experienced as stressful influence both the risky consumption of alcohol, and more entrenched forms of drinking. These findings have implications for the development of prevention programming, and possible targets of intervention for alcohol misuse treatments, aimed more generally at men, but particularly at younger men.

Keywords: alcohol use, traditional masculinity, male gender role, excessive drinking, cognitive belief-set

Emotional and physical violence toward male victims by female perpetrators – let's open the door

CELI, E. (Elements Integrated Health Consulting)

The aim of this literature review is to raise awareness on the prevalence, and understanding toward the context, of intimate

partner violence (IPV). Specifically, this study focused on domestic abuse and domestic violence toward male victims by female perpetrators. Additionally, the question of how effective we are at detecting and counseling male victims of domestic abuse or violence by female perpetrators is explored. A review of key literature and literature reviews often quoted when addressing the issue of male victims will be summarised and key issues to be considered by psychologists will be highlighted for future consideration. The alarming frequency and severity of IPV, specifically abuse toward male victims by female partners, challenges the perceptions of men and society alike. That is, "men are tough; surely he's stronger and has more power over her". Our own Australian Bureau of Statistics (2005) indicates that near one in three (29.8%) victims of current partner violence since the age of 15 is male. Men experience domestic abuse differently, particularly when one considers they may be at a disadvantage in their emotional literacy, social support and professional support compared to women. Research methodology may not appropriately capture the experience of male victims, with limited accessibility of male victims for research. Combine this with male victims' experience of shame, helplessness and re-victimisation within social and/or health paradigms, male victims face similar barriers to safely speaking up about their experience. Current social paradigms, educational training, health and legal services are ineffective in addressing the contextual issues surrounding male victims of domestic abuse by female perpetrators. At 'best', male victims are unrecognised and/or unsupported and at 'worst' they may be inadvertently re-victimised by health, police and legal services. Commencing discussion on this silent phenomenon of male victims aims to increase awareness and understanding of how men experience abuse and/or violence by female perpetrators. Considerations in research methodology and the social influences impacting on men's health will be highlighted.

Keywords: domestic violence, male victims, female perpetrators, intimate partner violence, social support

When the wheels fall off: Atypical depressive symptom presentation in male truck drivers

RICE, S. (Australian Catholic University)

Traditional male role expectations typically pressure men to adhere to norms emphasising stoicism, self-reliance, and the avoidance of emotional vulnerability. Such norms may interfere with the psychological health of men by impeding help seeking and altering symptom presentation for emotional disorders such as depression. Qualitative studies have repeatedly demonstrated that men frequently exhibit an alternate constellation of atypical, externalising symptoms when depressed. One explanation for this is that atypical symptoms such as anger, aggression and substance abuse are consistent with traditional male role expectations. In exploring this, the current study sought to investigate retrospective depressive symptom presentation in a sample of stereotypically masculine men within the trucking industry. Self-report data was collected from 91 Australian male truck drivers. Questionnaires were completed on-site at a truck depot prior to a morning shift. Respondents completed scales assessing prototypic and atypical symptoms of depression. Questionnaire items were complete for the last time respondents recalled feeling really 'down in the dumps' – a DSM-IV descriptor for depression. Total scores for prototypic and atypical symptoms were moderately correlated. Clinical categories mapping on to DSM-IV diagnostic criteria were generated. Based on the self-report scores, 22% of the sample met diagnostic criteria for a Major Depressive Episode for the retrospective period for which they were reporting. Contrary to prediction, individuals within the clinical group on average reported the co-occurrence of three times the number of atypical symptoms compared to those in the non-clinical group. Atypical symptoms most frequently endorsed by those in the clinical group included irritability, frustration, self-reliance, alcohol use and outward aggression. Atypical behaviors least endorsed by respondents were gambling, self-harm, drug use. Results indicate that atypical depressive symptoms were associated with underlying

psychological distress, and that prototypic and atypical symptoms were likely to co-occur. Further, results indicate that assessment of atypical depressive symptoms may provide valuable clinical information. Assessing atypical depressive symptoms may be particularly useful in cases where men adhere to traditional male role norms, but may be unlikely to admit prototypic symptoms that infer emotional vulnerability.

Keywords: depression, male truck drivers, male gender role, alcohol use, emotional vulnerability

Mental health problems in people looking for employment or already working: Theoretical models tested in different contexts

Chair(s): CORBIÈRE, M. (University of Sherbrooke)

Mental health problems and their consequences represent a large human and financial burden; approximately one-quarter of the world's population will be directly affected by such problems at some stage in their lives. In most industrialized countries, vocational success for people with mental health problems represents the cornerstone of their recovery. However, for people with severe mental disorders (e.g., schizophrenia) who obtain employment, job tenure is often brief: from 3 to 7 months. For people with transitory mental health problems (e.g., adjustment disorders), work absences often represent more than 40% of all salary insurance claims, regardless of the country. The literature contains few theoretical models explaining the detection of mental health problems in people already in the labour market, or the vocational successes of those with mental disorders looking for employment. As such, the symposia will describe people with severe or transitory mental health problems integrating into the workplace or already working via diverse theories relevant to the contexts, such as the job demand-control-support model (Karasek), the effort/reward imbalance model (Siegrist), the Self-determination theory (Deci, 2004), job search models (Sacks; Schwab) and the theory of planned behavior (Ajzen, 1988, 1991). The main learning objective is to offer a better understanding of the key conceptual elements involved in the field of mental health and the workplace.

Psychological distress among government employees: a mixed approach

DURAND, M. (University of Sherbrooke), COUTU, M. (University of Sherbrooke), LEMIEUX, P. (University of Sherbrooke)

Mental disorders are among the main causes of short- and long-term disability. In order to address this issue, a better understanding of the level of distress and associated factors is needed. The aims are to describe the level of distress in employees working in a provincial governmental agency and to identify the main work disability factors associated with the level of distress. A web survey was conducted with all employees of the governmental agency. The variables assessed were based on the models of imbalance effort-reward, job demand, self-determination, work-family conflict and self-esteem. The survey's qualitative approaches using focus groups and an ergonomic analysis (diary) of the mental load after a working day documented the main work disability factors. The response rate was of 52% and respondents' characteristics were representative of the Agency. The level of distress found among respondents ($n = 2368$) was significantly higher than the general Quebec population. The main disability factors associated with distress included the relationship with the supervisor, the need for acknowledgement, work motivation and work-family conflict. From the 11 focus groups ($n = 86$) and 193 diaries, factors explaining the results from the survey included: rapid organizational changes and lack of control over these changes, the perception of inconsistencies between performance criteria and the agency's mission, and lack of acknowledgement of the complexity of the job. Based on these results preventive strategies and interventions on individual and organizational levels are suggested. For example, the goal of an individual intervention is to address psychological distress in employees as soon as possible, with strategies that make sense for employees, such as modifying performance criteria to acknowledge the complexity of the job. For an organizational intervention, the approach is to offer to supervisors a higher level of decision-making and to give them tools to detect depressive symptoms in their employees.

Keywords: *mental disorders, disability, distress, motivation, work-family conflict*

The motivation to keep working of people with mental disorders employed in Social Enterprises

FRACCAROLI, F. (University of Trento), ZANIBONI, S. (University of Trento), VILLOTTI, P. (University of Trento)

Social Enterprises were originally developed in Italy in the 1980s as innovative firms to help disadvantaged people with the work integration process, e.g., individuals with mental disorders. The approach of Social Enterprises to the work integration process corresponds to the Place-then-Train approach, placing the person in real work situations prior to offering specific training. One of the principal goals of this on-the-job training approach is to improve both social and professional abilities in order to guide disadvantaged people to be fully productive workers and, thus, facilitate the creation of job opportunities. This study explores a model of the motivation to keep working (a key construct of the work integration process) for people with mental disorders employed in Social Enterprises. Based on results from previous studies, specific variables from the model were taken into consideration: personal and clinical characteristics (e.g., severity of the psychiatric symptoms, occupational self efficacy), and environmental characteristics (e.g., work accommodation, social support). 164 individuals with mental disorders employed in Social Enterprises located in Italy filled out a battery of questionnaires to assess clinical, personal and work related variables. Of these, 62.7% were men. The average age of all participants was 41 years ($SD = 8.38$). Path analyses with LISREL 8.7 were used to test the hypothesized model. The model tested showed good fit indices $\chi^2 = (21, N=164) = 8.14, p = .99$; $\chi^2/df = .39$; RMSEA = .00; NNFI = 1.00; CFI = 1.00). All paths were significant and followed the hypothesized directions. Our data supports the hypothesized model. The model showed that different variables (i.e., personal, clinical, and environmental) must be taken into consideration to understand the motivation to keep working for people with mental disorders employed in Social Enterprises. This issue is important because of the implications for vocational interventions to improve the work

integration process for this targeted population.

Keywords: *social enterprises, mental disorders, Place-then-Train approach, disadvantaged people, environmental factors*

Job search behavior (JSB) dimensions: A research on people with mental illness

GILLES, P. (University of Aix en Provence), MOLINIER WEINSTEIN, N. (University of Aix en Provence)

The purpose of this study is to examine the dimensions of job search behavior (JSB) and their predictive validity concerning job interviews and job status for people with mental illness. Although some research has investigated a composite job search index (Kopelman, Rovenpor, & Millsap, 1992) or job search categories (e.g. Blau, 1994), there is no consensus about the number and nature of the dimensions. Data were collected from 200 participants with mental illness (mood, psychotic, anxiety or personality disorders) looking for employment. JSB inventory was measured using a 13-item behavior scale (Perron et al., 2006) based on previous measures of job search behavior. Participants contacted by telephone indicated whether they had carried out each behavioral item on a dichotomic scale (yes/no) in the previous 9 months. They also reported whether they obtained job interviews (yes/no) and employment (status and quality). Participants carried out a mean of 6 job search behaviors ($SD = 3$). The range of intercorrelation items was from .06 to .59. Three categories were extracted from a hierarchical ascendant analysis: preparatory (e.g., "researching information about job search strategies"), active (e.g., "telephoned a prospective employer"), and distal network (e.g., "spoke with previous employers"). The prediction of job interviews was higher for active JSB than preparatory JSB (22% vs. 3% of the variance). Job status was predicted by active JSB only (6% of variance). These results are consistent with Blau's (preparatory vs. active, 1994) and Granovetter's (weak ties, 1994) studies. Since we found implications between the three categories (preparatory => active => distal network), this description of JSB is better than

using a global index to evaluate the type and the level of engagement people have in their JSB. Another interest is that JSB categories predict job search success differently. Developing this research avenue will be useful in improving coaching for job search seekers with mental illness.

Keywords: job search behaviour, predictive validity, job interviews, mental illness, employment

Work integration of people with severe mental illness registered in supported employment programs: A conceptual model

CORBIERE, M. (University of Sherbrooke),
LECOMTE, T. (University of Montreal)

Vocational outcomes of people with severe mental illness registered in supported employment programs can vary greatly from one individual to the next. Investigators have, consequently, tried to identify the individual characteristics that could best predict obtaining employment in such programs. To date, there is a paucity of information regarding how psychosocial factors such as self-esteem or self-efficacy influence the work integration process of people with severe mental disorders, or how these factors interact with perceptions of barriers to employment, for instance, to explain obtaining competitive employment. The purpose of the study is to develop, from the literature (based on the Theory of Planned Behaviour), and to test, a model of work integration for people with severe mental disorders participating in supported employment programs. Data were collected from 281 people with severe mental disorders registered in supported employment programs located in Canada. The longitudinal study consisted of two phases. At the time of the participants' entry into the program, the data gathered from participants included several dimensions (i.e., background, psychosocial, work-related, and clinical variables). At the nine-month follow-up telephone interview, all participants were asked to describe their vocational path. Path analyses with LISREL 8.7 were used to test the hypotheses regarding the conceptual model adapted to the work integration of people with

severe mental disorders. Based on the Theory of Planned Behaviour, the model integrated significant variables (e.g., self-esteem, perceived barriers to employment, motivation to obtain employment) to predict work integration. The modified model showed acceptable fit indices ($\chi^2 = (60, N = 281) = 75.52, p = .08; \chi^2/df = 1.26; RMSEA = .03; NNFI = .99; CFI = .99; IFI = .99$). The development of such a model is needed in order to better understand the combination of individual factors explaining the work integration of this population (e.g., negative self-esteem significantly predicts perceived barriers to employment, which, in turn, predicts motivation to obtain employment) and consequently to offer appropriate vocational or clinical interventions, as well as to develop new research avenues in the vocational rehabilitation field

Keywords: mental illness, self-esteem, self-efficacy, employment, supported employment programs

Mental health recovery after the 2004 Tsunami in Thailand

Chair(s): ROMANO, J. (University of Minnesota)

Discussant(s): JOHN ROMANO, J. (University of Minnesota)

The December 26, 2004 Asian tsunami was a natural disaster of historic portion. The massive earthquake traveled across 14 countries, killing about 230,000 people. Thousands of people were injured, 1.7 million people became homeless, and it is estimated that the tsunami caused \$10 billion dollars in damage. Thailand was one of the countries that experienced much loss of life and damage across several seaside provinces noted for their fishing and tourism industries. In Thailand over 8,000 people were killed. The objective of this symposium is to report on four research studies that focus on mental health recovery of Thai people affected by the tsunami. The research began shortly after the tsunami and continues to this day. The research team includes Thai psychology and nursing faculty as well as a U.S. psychologist. Members of the research team participated in the mental health recovery efforts immediately after the tsunami, and have revisited the affected area for consultation with local partners and data collection. The studies focus on several aspects of development and well-being of Thai students and adults affected by the tsunami, from elementary school children through elder citizens. Data were also gathered from teachers and family members of tsunami affected youth. Collectively, the four research studies report on data gathered from approximately 1,100 individuals. Three of the studies used quantitative methods and one study used qualitative methods. The studies report on several variables across the different sample groups including: needs of tsunami affected youth and adults, impact of the tsunami on youth and their teachers and family members, developmental differences between children affected and not affected by the tsunami, behavior problems and family functioning of adolescent survivors, and the impact and physical and psychological health of elders

coping with the disaster. The papers address the importance of sustaining psychological and physical well-being of tsunami survivors' years after the disaster as survivors continue to mourn their losses. The papers will add to the research literature on the psychological impact of natural disasters and suggest how mental health professionals and disaster relief workers can sustain long-term recovery efforts after the immediate crisis ends.

Sustainable mental rehabilitation and collaboration: Psychological rebuilding for children, adolescents, families and teachers in the Tsunami aftermath

SIRIVUNNABOOD, P. (Chulalongkorn University)

This study was constructed to propose the sustainable mental rehabilitation and collaborative psychological rebuilding for children, adolescents, families, and teachers. Three phases of the long term research plan are: Phase 1, conduct a needs assessment of children, adolescents, families and teachers; Phase 2, examine the effects of the tsunami on children, adolescents, families and teachers; Phase 3, propose a rehabilitation center to implement and monitor community outreach and support for children, adolescents, families and teachers. Participants were 880 individuals affected by the 2004 tsunami in Phang Nga province, Thailand. There were 240 elementary and 240 secondary school students, 200 family members, and 200 teachers. Survey forms focusing on need assessment and psychological impact of the tsunami were administrated. Findings revealed as follows: Phase 1 (Needs Assessment). While the children group reported the highest score on the need for a new family for the orphans from the 2004 tsunami, the adolescents group reported the highest score on the need for scholarships for further education. For the teacher group, the need for sustainable rehabilitation of psychological rebuilding was the most wanted need. Phase 2 (Impact of the Tsunami). Results showed that the children aged 5 -12 years who were exposed to the tsunami demonstrated lower physical and cognitive abilities compared to those who were not expose to the tsunami. However, only the tsunami affected children aged 11-12 years

experienced high scores on emotional difficulties when compared to those who were not exposed to the tsunami. With regard to the tsunami-affected adolescents, adolescents with high numbers of tsunami experiences were more likely to develop emotional and behavioral problems than those who had no or little experiences. In addition, both teachers and families who had high scores on the number of tsunami experiences demonstrated unhappiness and poor physical and mental health. Phase 3 (Proposed Rehabilitation Center). In this phase, the research team plans to implement the project results from Phase 1 and 2. A model for sustainable mental health rehabilitation and collaborative psychological rebuilding across the community will be discussed.

Keywords: sustainable mental rehabilitation, tsunami, cognitive abilities, adolescents, natural disasters

Impact of the 2004 tsunami disaster on the physical, cognitive, and emotional development of children in Phang Nga Province, Thailand

RITHAKANANONE, P. (Chulalongkorn University)

A comparison study was carried out to measure the physical, cognitive, and emotional development of school children who lived in the 2004 tsunami-affected and non-affected areas in Phang Nga Province, Thailand. A total of 414 school children in grades 1-6 were measured, 192 from one non-tsunami-affected school, and 222 from two tsunami-affected schools. Data were collected in 2007 (children in grade 1 were about 2 years old and 6th grade children were about 5 years old at the time of the tsunami). Children's weight and height were compared with the norm of Thai children of the same age and sex. It was found that boys in the 1st, 2nd, 3rd, and 5th grades and girls in the 1st and 2nd grades from the tsunami-affected schools were significantly shorter than normal Thai children. The study also showed that boys in the 3rd grade and girls in the 2nd grade from the tsunami-affected schools had significantly lower weight than the norm. However, the weight and height of children from the non-tsunami-affected school were either not different or

significantly higher than the norm. A measure of children's cognitive ability comprised of numerical, spatial, addition and subtraction, analogical and comparative abilities was administered to the children. The study showed that the 5th and 6th grade children from the tsunami-affected schools had significantly lower cognitive ability than children of the same grades whose school was unaffected by the tsunami, especially, on numerical, spatial, addition and subtraction, and analogical abilities. Children's emotional development was measured by using a 4-point pictorial rating scale by which children were asked to rate their mood in various situations. Results showed that the 5th grade children from the tsunami-affected schools had significantly poorer mood than children of the same grade whose school was unaffected by the tsunami. The study also revealed that girls from the tsunami-affected schools had significantly poorer mood than their counterpart whose school was not affected by the tsunami. Discussion on the impact of the 2004 Tsunami disaster on the development of these children and intervention programs for school and family will be presented.

Keywords: tsunami, development, children, Thailand, cognitive ability

Tsunami impact, religious practices, family functioning, and well-being on behavior problems of Thai adolescent survivors after the 2004 tsunami

TUICOMEPEE, A. (Chulalongkorn University)

Youth behavior problems (e.g. disobedience, difficulty concentrating, increased aggression, irritation, somatic complaints, fear, and depression) are some of the mental health concerns following a devastating disaster. It has been noted that the psychological impact, including behavior problems of disaster survivors, remains for many years later. This study examines behavior problems of adolescent tsunami survivors at about 4.5 years after the 2004 tsunami. Other related variables such as youth tsunami experiences, religious practices, family functioning, and adolescents' well-being were also measured. Participants were 240 adolescents in grades 7-12 at two public tsunami-affected schools in

Phang Nga province, Thailand. Their mean age was 14.6 ($SD = 1.86$, range 12-19) years. Data collection used self-report measures: Objective Tsunami Experiences Index, General Functioning Scale, Religious Practices Index, Oxford Happiness Inventory, and the Thai Version of Youth Self-Report. The reliabilities of the measures as assessed through either Cronbach's alpha coefficient or the Kuder-Richardson 20 coefficients varied from .50 to .94. Path analysis revealed that the adolescents' tsunami experiences (e. g. saw much destruction of building, vehicles and boats, saw people severely injured or dead bodies, lost house and other personal property, lost one or more relatives, lost family members, lost one or both parents) directly related to the adolescents' well-being and indirectly related to the number of reported behavior problems. The adolescents with high numbers of tsunami experiences, who less engaged in religious practices, had poor family function, and were less happy demonstrated behavior problems. The path analysis lends insight into the disaster's impact on youth survivors' adjustment. Positive family functioning and increased religious practices may contribute to feelings of personal happiness and decrease the impact of the disaster experiences, especially related to youth behavioral problems. Ways to reduce the impact of natural disasters on youth survivors will be discussed.

Keywords: tsunami, religious practice, family functioning, well-being, adolescents

From psychological problems to self-care behaviors: Late life tsunami survivors 4 years after the tsunami

SOONTHORNCHAIYA, R. (Chulalongkorn University)

Although Thailand rapidly received assistance and successfully implemented relief efforts, the mental trauma of the disaster was still embedded in elders who experienced the disaster. Four years after the tsunami, elders in this study who experienced the disaster were still affected psychologically, and their health status and living situation were also affected. Although Thailand rapidly received assistance and success in relief response, the mental

trauma still embedded within individuals who experienced this stressful life event. The purpose of this qualitative study was to collect data about the psychological problems, coping methods, and self-care behaviors of older adult survivors of the 2004 tsunami. Participants were 22 adults, aged between 60-81 years old (no dementia), who had direct experiences with various losses from the 2004 tsunami. Semi-structured in-depth interviews, audio-tape recorders, and field notes were used to collect and record data at participants' home. Data were collected about four years after the tsunami. Thematic analysis was used to discover regularities and patterns among descriptions. Four major themes emerged: 1) Stressful mental trauma was still embedded in participant minds, especially suffering from missing beloved persons; 2) concerns focused on educational scholarships for their children, and continuous care for themselves; 3) coping with stress included reframing thoughts as "plong", living with life understanding, doing activities for healing, receiving support from family members, and building self-esteem; 4) living with self-care included seeking and continuing physical and mental health care from professionals as necessary, and holding onto Buddhist religious principles. The findings delineated that the tsunami was a very stressful life event that has had prolonged effects on the elders' lives. Older adult survivors continue to suffer from their losses and remain concerned about their children's lives. Although participants found ways to cope with the stress of the disaster and to live more wisely, survivors needed professional help for continuous physical and mental health care. Findings suggest that health care professionals continue follow-up care with older adult disaster survivors, and encourage self-care such as the development of coping strategies with enhanced religious practices.

Keywords: psychological problems, self-care, tsunami, Thailand, mental trauma

Mental illness and policing

Chair(s): THOMAS, S. (Centre for Forensic Behavioural Science, Monash University)

Discussant(s): DICKINSON, A. (Victoria Police)

Police have frequent contact with people experiencing mental illness; however, little is actually known about actual contact rates, precursors, processes, interventions and outcomes of these interactions. This symposium will present key findings arising from Project PRIMeD, a 5-year collaborative program of research with Victoria Police, funded by the Australian Research Council from 2007 - 2011. The key learning objectives are: (1) how often do police come into contact with the mentally ill? (2) do outcomes of contacts with the mentally ill differ from those with the non-mentally ill? (3) what types of offences and patterns of offending bring the police into contact with the mentally ill? And (4) what the gaps are in police knowledge, training, service integration and delivery?

Criminal offending, victimisation and the schizophrenias

SHORT, T. (Centre for Forensic Behavioural Science, Monash University)

Despite the widespread incidence of crime amongst mentally ill populations, relatively little research has focused on the relationship between offending, victimization and the schizophrenias. The available research shows that persons with schizophrenia are more likely to experience and perpetrate violent crime, and represent a vulnerable population in the community. Factors that increase and decrease the risk of violence need to be reliably identified, with a view towards creating effective policing procedures to manage the risks posed to and by those with severe mental illness. This presentation will report on a study that explored patterns of violence, victimization and offending in a large sample of people diagnosed with schizophrenia in Victoria, Australia between 1975 and 2005.

Changes in patterns and types of crimes and victimisation rates will be compared across this time period, which encompasses the major mental health reforms associated with deinstitutionalization.

Keywords: *crime, schizophrenia, victimization, violence, policing procedures*

Police contact with people experiencing mental illness: Prevalence and challenges

THOMAS, S. (Centre for Forensic Behavioural Science, Monash University)

Despite anecdotal evidence suggesting the commonality of contacts between the police and people experiencing mental illness, very little evidence exists that has actually sought to quantify this or understand police perspectives on this. Against this background we carried out a series of research studies to investigate these questions. Studies included a study of psychiatric symptoms in police cells; the needs and diagnoses of detainees in police cells; and a large survey of operational police members documenting their estimates of the rates and types of contacts they had with people experiencing mental illness along with their attitudes and views on the biggest challenges they faced at this interface. This presentation will report on key findings arising from these studies. The discussion focussing on the need for police training and for functional interagency collaborations.

Keywords: *police, mental illness, police training*

The roll-out and functioning of the Mental Health Transfer Form: Early findings and implications for community policing

LUEBBERS, S. (Centre for Forensic Behavioural Science, Monash University)

In the course of their duties the police frequently come into contact with people experiencing mental illness. These encounters can lead to considerable time commitments for attending police members, especially when the person requires an assessment at an Emergency Department. The aim of the study was to document the circumstances surrounding police contacts with people

experiencing mental illness by reviewing contact data routinely recorded by police members across the State. The Mental Health Transfer Form has recently been rolled out by Victoria Police and seeks to document the frequency and types of contacts between police and people experiencing mental illness. All police members are required to complete this form on every occasion when they came into contact with a person experiencing mental illness. Early data on its introduction to routine police practice across the State will be presented. This presentation will focus on describing the reasons for police involvement in these encounters, where the person was transported to, response times of services requested, and the initial outcomes of the police involvement. Additionally, by considering the time that the police members estimate they have taken on these encounters, the financial cost associated with these encounters and activities ensuing will be estimated. Implications for service providers will be discussed in light of these findings.

Keywords: police, mental illness, Mental Health Transfer Form, Victoria Police

illness and practical tools to help guide the development of more policy and practice developments for police and mental health service providers at this interface.

Keywords: police, Coronial Reports, fatal incidents, mental illness

In-depth examination of coronial reports following the fatal use of force by the police

KESIC, D. (Centre for Forensic Behavioural Science, Monash University)

Routine encounters between the police and members of the community can sometimes result in the police needing to use fatal force in order to resolve the critical incident. This research investigated the Coronial Reports of all persons that the police fatally wounded between 1982 and 2007 in Victoria, Australia ($n=48$). The aim of the study was to examine the patterns and commonalities in the fatal incidents, the following variables were studied: background of the decedents, including the presence of any mental illness; antecedents to the incidents; behavioural presentation of decedents, including being affected by substances; operational decisions made, and other types of force used prior to fatal force being used. The discussion will focus on furthering our understanding of fatal incidents involving persons who are experiencing mental

Minding the Gap: A critical examination of the historical, current and potential engagement of psychology and psychologists in fostering (or impeding) the social and emotional wellbeing and mental health of Indigenous peoples

Chair(s): GRIDLEY, H. (Australian Psychological Society)

Discussant(s): DUDGEON, P. (Australian Indigenous Psychologists Association)

The aim of this symposium is to examine the role of psychological science and practice in contributing to, maintaining and potentially narrowing the current gap in social and emotional wellbeing and mental health outcomes between Indigenous and non-Indigenous peoples. Taken together, these three papers invite psychologists to consider the impacts of their science and practice in the lives of Indigenous people, with a particular focus on the mental health and wellbeing of Aboriginal and Torres Strait Islander Australians. The learning objectives of this symposium are: to review the policy context of Aboriginal and Torres Strait Islander mental health and wellbeing; to encourage reflective process in psychological research and practice with Indigenous peoples; to learn about the key determinants of Aboriginal and Torres Strait Islander social and emotional wellbeing (SEWB); to consider ways of addressing the current gap in SEWB and health outcomes between Indigenous and non-Indigenous Australians; to consider the process, outcomes and lessons learned from a project designed to identify innovative models and resources to increase Aboriginal and Torres Strait Islander mental health awareness and encourage help-seeking. Questions that need to be asked of any research

initiative, policy or intervention include: Who is expected to change? Does it materially improve the lives of Indigenous people? How many? Which communities? Is psychology part of the problem or part of the solutions? How can we tell?

The policy context of Aboriginal and Torres Strait Islander mental health

KELLY, K. (Australian Indigenous Psychologists Association), WALKER, R. (Telethon Institute for Child Health Research)

This paper focuses on the national policies and reports that specifically address Indigenous social and emotional wellbeing and mental health issues, together with the relevant reports and commissioned inquiries that have influenced these policies. It outlines the key national policies, frameworks and reports, including the specific aims of key policies or reports; why they were developed and by whom; what they intended to achieve; and whether any programs or services were implemented and/or any practices or processes were influenced. Policy development and implementation can be a piecemeal and at times ad hoc 'action-response- action' process to address a perceived issue or need. Changes in policies tend to be underpinned by assumptions regarding the policy process and the reasons for success or failure in implementing policies or programs. This paper describes the historical and social context of colonisation and how successive policies have impacted on Indigenous social and emotional wellbeing.

Keywords: mental health, Indigenous, emotional well-being, policy development, colonisation

Living on the edge: Social determinants of indigenous Australian mental health and well being

GEE, G. (Australian Indigenous Psychologists Association), KELLY, K. (Australian Indigenous Psychologists Association), GLASKIN, B. (Australian Indigenous Psychologists Association), DUDGEON, P. (Australian Indigenous Psychologists Association)

This paper explores the determinants of Indigenous social and emotional wellbeing (SEWB), and provides a range of recommendations for addressing the current gap in SEWB and health outcomes between Indigenous and non-Indigenous Australians. Part 1 introduces current definitions of the social determinants of health, together with understandings of Indigenous mental health and SEWB. Part 2 draws on a range of national health survey reports to examine the high levels of non-specific psychological distress reported by Indigenous Australians. Serious psychological distress can be considered to be one type of global indicator of poor social and emotional wellbeing. It appears to be an independent predictor of, and part of the causal pathway that leads to, physical illness and mortality risk, with documented associations to reduced life expectancy, premature mortality, greater incidence and prevalence of disease, increased behavioural risk factors for ill health, and lower overall health status. In addition to risk factors, the paper also identifies a number of important strengths or protective factors, such as social cohesion, a sense of positive wellbeing and resilience and connection to land, culture, spirituality and ancestry. Part 3 discusses the lack of culturally appropriate services available to meet the social and emotional needs of Indigenous Australians and the need to develop resources to promote SEWB and prevent serious psychological distress. The paper concludes that modifying the social determinants that lead to serious psychological distress should result in a range of beneficial outcomes and contribute to closing the gap in life expectancy between Indigenous and other Australians. Measuring and monitoring levels of psychological distress might also help to move Indigenous social and emotional wellbeing from a descriptive construct toward an explanatory framework. Further development of SEWB measures and culturally competent SEWB programs will help to close the gap between the health of Indigenous and non-Indigenous Australians. Increasing our capacity to target risk and protective factors and prevent serious psychological distress among Indigenous Australians should be key priorities. The paper concludes with a number of recommendations to progress the

development of the Indigenous SEWB field and the prevention of serious psychological distress.

Keywords: Indigenous, emotional well-being, psychological distress, risk factors, resilience

The Indigenous mental health awareness and help-seeking project

GRIDLEY, H. (Australian Psychological Society), DUDGEON, P. (Australian Indigenous Psychologists Association), KELLY, K. (Australian Psychological Society)

Improved Indigenous mental health outcomes will not be achieved unless mental health services can successfully engage with Aboriginal and Torres Strait Islander peoples and communities. This paper provides an overview of a project designed to identify innovative models and resources to increase mental health awareness and encourage help-seeking in urban, regional and remote Indigenous communities. A working party of Aboriginal and Torres Strait Islander psychologists was formed to oversee the project. The project involved a service access mapping exercise, an environmental scan and a comprehensive review of 46 innovative services in remote, rural and urban settings across the country. The working party developed criteria to assess each innovation against the identified needs of Indigenous people. The environmental scan showed restricted access to social and emotional and primary mental health care for Indigenous communities, particularly in remote communities. Different lessons emerged from the reviews of Indigenous-led and non-Indigenous innovations. Community engagement was more likely if service providers could quickly demonstrate cultural relevance to the communities they were servicing. The findings highlighted the importance of viewing awareness-raising of mental health issues as more than a stand-alone activity, particularly if there is restricted access or an absence of services to respond to any help-seeking which may occur. Recommended outcomes of the project included the establishment of a web-based resource that: exemplifies the critical elements of service models that increase mental health

awareness and help-seeking in Indigenous communities; identifies a set of core principles to guide the development of culturally safe, accessible services for Indigenous communities; increases policy makers' understanding of innovative, best-practice models that work in Indigenous communities; and encourages greater recognition and awareness of best-practice models across a broad range of agencies working with Indigenous communities that contributes to local sustainability and broadening of their application.

Keywords: *Indigenous, mental health, communities, help-seeking*

Money management

Chair(s): KIRCHLER, E. (University of Vienna),
ROLAND-LÉVY, C. (University of Reims)

Discussant(s): LEISER, D. (Ben Gurion University)

The symposium deals with applied psychological research on money management. In detail, the invited presentations focus on income distribution and emotional reactions related to income differences, on social representations of saving and credit, predictions of credit burden and evaluation of repayment plans as well as hindsight effects after successful credit payback, on socially responsible investment and the stock market, and tax behavior. Key learning objectives are demonstrating the variety of economic psychological topics in theory, method and application. In particular the focus of the symposium is on the interaction between emotional and cognitive dynamics in money management. In bringing together experts on different areas of money management, coming from different countries, the discussion should focus on common themes and potential cultural differences.

Envy and preferences for income distribution

KEMP, S. (University of Christchurch), BOLLE, F.
(Europa-University Viadrina)

The first aim of this study was to see whether people's preferences for income distributions relate to their tendency to envy other people. Secondly, to investigate whether some objects (e.g. wealth) are more likely to be envied than others (e.g. happiness). A series of three small-scale questionnaire studies have been used to date. All of these have employed samples of university students – chosen so as to make the lifestyles and thus potential objects of envy fairly similar. Respondents have read scenarios of societies with different happiness or income distributions and recorded their choices for living in them. They have also completed a standard scale of dispositional envy and been asked how much they would vary similar

others who enjoy different forms of success. The following results have emerged to date: (1) People's propensity to envy is surprisingly well captured by their dispositional envy scores. As a first approximation, envious people envy almost any success or good fortune on the part of others; non-envious people envy very little. (2) There is a slight tendency for income and other objective measures to be envied more than happiness. (3) No measure of envy explains people's choices for different happiness or income distributions within societies very well. This is not because people do not differ on these measures; they do, however, there is virtually no covariation. It is concluded that the desire that some people have to see more equal wealth or happiness within society is not greatly driven by envy.

Keywords: *income, wealth, envy, society, happiness*

Financial decision-making and social representations in the connection to financial crisis

ROLAND-LÉVY, C. (University of Reims)

Social representations of credit and savings were studied in the French population in winter 2009, in the context of the financial crisis in connection to financial decision-making. Even if social representations do not change easily, they can be affected by the general context in which social groups holding these social representations are. In the context of a financial and social crisis, it is hypothesized that the social representations of financial elements, e.g. taking credit and/or saving, will be different for those who feel that they are directly affected by the crisis compared to those who feel that the crisis does not or will not affect them personally. The links between social representations and financial decision-making (buying, taking credit, saving) are also approached. Two groups of French participants, aged 18 years and above, responded to a face-to-face questionnaire which required half of the participants to consider that they are affected by the crisis, while the other half of participants were not. Social representation was studied with free association tasks, along with a series of items measuring attitudes

towards both the financial crisis and ways in which it is affecting the participants. Other free association tasks measure the social representation of credit and savings. Finally, a series of questions are devoted to financial planning and buying during the coming six months, as well as socio-demographic characteristics. The results show differences in the central nucleus and in some of the peripheral elements of the representation for each group (affected versus not affected). The differences imply dissimilarities in planned behavior and financial decision-making, especially in trying to get credit versus saving behavior. The results are discussed in comparison with those obtained in other studies carried out on the same topic in a context of no financial crisis versus financial crisis.

Keywords: *financial crisis, social representations, decision making, financial planning, credit*

Loan repayment as intertemporal sequence

HOELZL, E. (University of Vienna)

Repaying a loan can be both a financial and an emotional burden. For an informed decision about loan use, consumers would ideally be able to correctly predict how burdensome a loan will be and how this burden will develop over time. Institutions, on the other hand, could offer loan repayment plans that fit consumers' needs. The present work combines research on affective forecasting and on intertemporal sequences in the domain of loan repayment. In Study One, a survey was conducted with 117 homeowners, grouped by duration of living in their loan-financed home. Participants reported their current experience of loan burden, and gave forecasts for the future. In Study Two, 105 participants were asked to imagine a situation where they consider a 10-year-loan for an apartment and could choose between loans with rates either falling or rising over time. In Study Three, 180 participants were asked to predict for the same scenario how they would feel about the loan in year one and in year 10. In Study One, results showed that participants in an early stage of repayment expect lower levels of loan burden in the future than experienced now; however,

participants in later stages of repayment report equally high levels of experienced loan burden as the first group. In Study Two, the majority preferred falling rates over rising rates. In Study Three, results indicate differences in evaluation over time and confirm the preference for falling rates. Overall, the findings support a preference for improvement, i.e., loans with falling rates being preferred over loans with rising rates. This is also in line with the expectation that loan burden would decrease over time. Implications for the design of loan repayment plans are discussed.

Keywords: loan, loan repayment plans, consumers, intertemporal sequences, forecasting

Effects of short-term versus long-term rewards of socially responsible investments

GAERLING, T. (University of Gothenburg),
ANDERSSON, M. (University of Gothenburg),
HEDESSTRÖM, M. (University of Gothenburg),
SUNDBLAD, E.-L. (University of Gothenburg)

Counteracting short-termism within the finance sector is believed to facilitate for companies to manage their practices in a way reconcilable to sustainable development. We aim to investigate whether changes in how portfolio managers are incentivised and monitored will make them more likely to favour stock companies with better environmental practices. Empirical evidence on the effects of prolonged monitoring intervals on investment decisions is largely lacking. In informal interviews with finance professionals, we map out the practices of incentivising portfolio managers within the Swedish fund management industry. This information will be used in designing experimental studies. Simulating choices faced by portfolio managers, participants (finance students at late stages of education) will make investment decisions under the assumption that taking environmental information into account will increase stock returns within a given time frame. Within that time frame, monitoring frequency and bonus size will be manipulated in order to investigate effects on investment decisions. It was found that the most common method to incentivise portfolio managers is by

offering them a monetary bonus conditional on the fund performing better than its benchmark index. Performance-related bonuses are generally awarded annually. Interestingly, this applies not only to retail funds but also to insurance companies and pension funds with long-term time horizons for their investments. While bonuses in some cases are restricted to a maximum of two to four months' wages, some organisations do not apply a ceiling for their bonus payments. For some types of funds, bonus systems also include a three-year component. Current incentive systems for portfolio managers make them manage investments towards short time frames within which better environmental performance is unlikely to materialise in financial returns. We will present experimental evidence showing under what circumstances changes in incentives will make portfolio managers more likely to favour stock companies with superior environmental practices.

Keywords: finance sector, stock companies, management, investment, environmental factors

Tax compliance decisions depending on fines and monetary incentives

KIRCHLER, E. (University of Vienna), KASTLUNGER, B. (University of Vienna)

Tax compliance is maintained by the threat of punishment for tax evasion. However, in tax compliance literature a positive approach to encourage tax compliance is often recommended. A few empirical studies addressed the effect of monetary rewards for increasing tax compliance. In the present study the effects of high versus low monetary rewards on tax paying decisions are studied. A laboratory experiment was conducted where 86 participants had to decide about paying their taxes in 60 tax filing rounds. In each round they received an income from which they decided to pay their taxes and they were informed about audit probability and fine rate. Participants were randomly assigned to one of the three experimental conditions. Beside the control condition, two rewards conditions were conducted, in which participants faced high versus low monetary rewards when audited and found to be compliant. Expected values between all three conditions were held

constant by varying fine rates for evasion. The results show that taxpayers in the high reward condition were more often compliant than those in the control condition. Furthermore, an immediate effect of rewards on tax compliance in the immediate following round was found. Taxpayers experiencing an audit and being rewarded for their compliance paid more taxes in the following round compared to audited compliant taxpayers that experienced no rewards. The results highlight the importance of a positive and reciprocal relationship between taxpayers and tax authorities. The results show that in addition to the pure monetary effect, rewards have a relational effect that is expressed in higher tax compliance immediately after experiencing a reward for their tax compliance.

Keywords: tax compliance, monetary rewards, audit, taxpayers, tax evasion

Motivational issues in sport: Perfectionism, goals, moral functioning and engagement

Chair(s): HALL, H. K. (Norwegian University of Sports Science), ROBERTS, G. C. (Norwegian University of Sports Science)

The symposium attempts to bring together research on motivational dynamics that is underpinned by different forms of goal striving. The research presented is informed by contemporary theoretical approaches to achievement motivation, which highlights the importance of goal directed behaviour in understanding various psychological processes underpinning both adaptive and maladaptive achievement outcomes. In the last decade, the topic of perfectionism has generated significant research interest in social, educational and clinical psychology. During the same period, research into perfectionism in sport has emerged and this has begun to examine the influence of perfectionism on various psychological processes associated with sport performance. The findings from this research provide evidence that while all forms of perfectionism may energise achievement striving and lead to positive outcomes, perfectionism that reflects a self-critical style may contribute to psychological debilitation in athletes. The first paper in the symposium identifies how different forms of dispositional perfectionism are associated with distinct patterns of motivational goals, and how these differentially influence burnout in elite junior athletes. The second paper further examines the motivational dynamics of athlete burnout and examines what additional influence perfectionistic cognitions have upon athlete burnout, over and above the influence of dispositional forms of perfectionism. The third paper seeks to understand how perfectionism might be developed through social learning in elite junior athletes, and it examines the degree to which perfectionistic cognitions are influenced by the motivational climates which are perceived as being created by parents and

coaches. The fourth paper deals with the impact of the motivational climate on important outcome variables in sport: cheating behaviour, peer relationships and burn out. The motivational climate the coaches create is important in that a mastery motivational climate is positively associated with positive peer relationships, lower level of cheating, and a lesser likelihood of burning out! The fifth paper examines motivational processes from a longitudinal perspective, and demonstrates the adaptive influence of children's task goals, measured during ski education, on perceptions of health and physical activity measured 6-12 years later.

The meditational influence of achievement goals on the relationship between perfectionism, and athlete burnout.

HALL, H. K. (York St John University), HILL, A. P. (York St John University), APPLETON, P. R. (University of Birmingham)

While perfectionistic goal striving may lead to positive performance outcomes, it is important that researchers look beyond performance effects and consider the wider impact of perfectionism on the psychological well-being of athletes. This is because evidence suggests that certain forms of dispositional perfectionism may foster patterns of achievement cognition, affect, and behaviour that may undermine the motivation and psychological well being of participants (Flett & Hewitt, 2005; Hall, 2006; Stoll, Pescheck & Otto, 2008) and thereby predispose athletes to burnout (Hill, Hall, Appleton and Kozub, 2008; LeMyre, Hall & Roberts, 2008). To date, however, no research has examined whether approach and avoidance forms of mastery and performance goals mediate the relationship between perfectionism and burnout. Understanding how specific patterns of achievement goals are evoked in perfectionistic athletes may help to pinpoint key psychological mechanisms that help to explain the onset of burnout in elite junior athletes. Therefore, the purpose of the present research was to examine whether approach and avoidance forms of mastery and performance goals mediated the relationships between perfectionism and athlete burnout.

107 male and 140 female (M age = 15.15 years, SD = 11.92 years) performance swimmers completed a multi-section questionnaire which included Flett and Hewitt's (1991) Multidimensional Perfectionism Scale, Conroy et al's (2003) 2 x 2 Achievement Goals Questionnaire (AGQ) and Raedekes and Smith's (2001) Athlete Burnout Questionnaire (ABQ). Structural equation modeling indicated that socially prescribed perfectionism was positively associated with mastery and performance avoidance goals while self-oriented perfectionism was positively associated with mastery and performance approach goals as well as performance avoidance goals. Furthermore, mastery approach goals were negatively associated with athlete burnout while both mastery avoidance and performance approach goals were positively associated with burnout. The findings provide evidence that socially prescribed perfectionism is regulated by avoidance motives and that mastery avoidance is a key mediator between this form of perfectionism and burnout. The findings also indicate that mastery and performance approach goals mediate the relationship between self-oriented perfectionism and burnout, with mastery approach goals underpinning lower levels of burnout and performance approach goals contributing to higher levels of burnout.

Keywords: perfectionism, achievement cognition, performance goals, athletes, burnout

Dispositional perfectionism, perfectionistic cognitions and athlete burnout

HILL, A. P. (York St John University), HALL, H. K. (York St John University), APPLETON, P. R. (University of Birmingham)

Sport psychologists have recently begun to examine athlete burnout in a systematic manner (e.g., Goodger, Gorely, Lavalley, & Harwood, 2007). Some research has focused on identifying motivational factors that render junior athletes vulnerable to the development of burnout (e.g., Lemyre, Hall, & Roberts, 2007). Perfectionism is one of a number of characteristics emerging as an important antecedent of this debilitating syndrome. Most research has examined the influence of

perfectionism on athlete burnout at a dispositional level. However, the work of Flett and colleagues (Flett, Hewitt, Blankstein, & Gray, 1998) suggests that perfectionism can also be assessed as individual differences in the frequency of the experience of perfectionistic cognitions which have a larger state component. Outside sport, research suggests that perfectionistic cognitions are a significant predictor of psychological distress above trait perfectionism and may contribute to burnout in athletes by contributing to chronic stress. The purpose of this investigation was to (i) examine the relationship between perfectionistic cognitions and athlete burnout, and (ii) examine whether perfectionistic cognitions account for additional unique variance in burnout above variance accounted for by dispositional perfectionism. Two-hundred and two male athletes (age $M = 18.81$, $SD = 2.87$, range 16-24) were recruited from youth teams of professional and semi-professional rugby union clubs in the UK. They completed Hewitt and Flett's (1991) Multidimensional Perfectionism Scale, Flett et al.'s (1998) Perfectionism Cognitions Inventory, and Raedeke and Smith's (2001) Athlete Burnout Questionnaire at the start of a season. A series of hierarchical regression analyses revealed that the frequency of the experience of perfectionistic cognitions was a significant positive predictor of all symptoms of athlete burnout. In addition, perfectionistic cognitions also explained a further 3-4% of variance in symptoms of athlete burnout above that accounted for by dispositional perfectionism. The findings suggest that individual differences in the frequency of the experience of perfectionistic cognitions may be an important factor when considering junior athletes susceptibility to burnout. Perfectionistic cognitions should, therefore, be included in both future models of the relationship between perfectionism and athlete burnout, as well as intervention strategies aimed at the prevention of the syndrome.

Keywords: *athletes, burnout, perfectionism, psychological distress, individual differences*

The influence of perceived parental and coach created climates on athlete's perfectionistic cognitions.

APPLETON, P. R. (University of Birmingham), HALL, H. K. (York St John University), HILL, A. P. (York St John University)

Previous investigations have identified a range of parental factors that underpin children's perfectionistic tendencies, including parents' own perfectionism, psychological control, punitive parenting styles, achievement goals, and unrealistic expectations. While these findings support the conceptual model of perfectionism development (Flett et al., 2002), researchers should remain cognisant of the wider social context that exerts influence over children's predisposition towards perfectionistic cognitions. The influence of a child's social context was highlighted in Flett et al.'s model, which includes an "environmental pressures" component. In the context of junior sport, such environmental pressures may extend to coaches, who have a significant and lasting influence on their athletes. To date, however, the role of the coach in the development of athletes' perfectionism has received scant empirical attention. In an attempt to address this void in the perfectionism literature, the aim of the current study was to determine whether the coach-created climate predicted unique variance in athletes' perfectionistic cognitions after controlling for the influence of the parent-initiated climate. 196 elite junior athletes completed the Parent-Initiated Motivational Climate Questionnaire-2 (White & Duda, 1993), the Perceived Motivational Climate in Sport Questionnaire-2 (Newton, Duda, & Yin, 2000), and the Perfectionistic Cognitions Inventory (Flett, Hewitt, Blankstein & Gray, 1998). A regression analysis was employed and partial support was achieved for the forwarded hypotheses. At step one, mother- and father-initiated worry-conducive climates predicted 8.3% of the variance in athletes' perfectionistic cognitions. The addition of the coach-created motivational climate at step two explained a further 10.6% of variance, bringing the total variance explained to 19%. At step two, significant predictors of athletes' perfectionistic cognitions were limited to athletes' perceptions of the coach-created mastery and performance climate. The current findings highlight the influence of a child's wider social environment in the development of perfectionistic tendencies. In particular, this

study demonstrated that in the context of elite junior sport, athletes' may exhibit perfectionistic thoughts as a function of the coach-created motivational climate.

Keywords: *perfectionistic tendencies, parental factors, perfectionism, athletes, parenting styles*

Motivational outcomes in sport: The relationship of a performance and a mastery climate to cheating, peer relationships and burning out

ROBERTS, G. C (Norwegian University of Sport Science)

The most interesting aspect of the recent work in motivation with achievement goal theory has been the attention paid to important outcome variables, for example peer relationships, cheating, overtraining and burnout. The present study reports the evidence from three studies that has investigated the effect of the motivational climate on important outcome variables such as cheating, quality of peer interaction, and burning out. We used canonical correlations to determine the relationship of the motivational climate to these outcome variables. Meaningful functions emerged on the variables. The performance climate was meaningfully related to burning out, peer conflict, and to cheating in sport. The mastery climate was meaningfully related to positive friendship and social acceptance, to less cheating, and to a lower likelihood of burning out! The evidence is suggestive that the motivational climate created by the coach affects the quality of peer relationships, cheating behaviour, and burning out.

Keywords: *motivation, achievement goal theory, Burnout, peer conflict, cheating*

The relationship between achievement goals, physical activity, perceived health and quality of life 6 – 12 years after finishing specialized ski-sport secondary education

SORENSEN, M. (Norwegian University of Sport Science)

Specialised ski-sport education implies that the students follow an ordinary curriculum, but are able to spend more time on their sport, and receive qualified coaching. Most pupils also have to move away from home, and there are costs involved for the family. This period of life (between 15 – 19 years of age) is decisive for personal development, education, social networking, and, for some, their further involvement in sport. We therefore wanted to investigate what the choice of this type of education would contribute to the life of young people. Questionnaires were sent out to all pupils that finished their ski- sport secondary education in the years of 1995, 1998, and 2001. In total, 217 individuals completed the survey. The preliminary results indicated that those with a high task orientation stayed longer in their sport, had a more positive perception of their health, and spent more time on general physical activity than those with a high ego orientation.

Keywords: *sport, ski-sport education, coaching, personal development, task orientation*

Motivation-centered interventions in sport: Theory, research, and practice

Chair(s): DUDA, J. (The University of Birmingham)

The study of motivation comprises the major research focus within the larger field of sport psychology. Two frameworks which have laid the foundation for a large body of contemporary research on the determinants and consequences of motivational processes in sport are the achievement goal theories (Ames, 1991; Dweck, 1999; Elliot, 2008; Nicholls, 1989) and Self Determination Theory (Deci & Ryan, 1985; Ryan & Deci, 1980). These two social cognitive frameworks focus on the meaning and implications of goal directed behaviors, both for the quantity and quality of achievement striving in the setting of interest. They also place importance on the role of the social environment on motivation-related cognitions, affect and action. All four papers in this symposium tie into these theoretical groundings. They speak to the particular features and promise for evidence-based practice of interventions which pull together what is known about achievement goals, the motivational climate, autonomy supportive environments, basic need satisfaction, self determination and optimal functioning in sport. Links are made to how and why we might intervene, via motivation-centered interventions, to manage debilitating forms of perfectionism in athletes, promote young sport participants' optimal functioning, influence the psychosocial development and health of children, and use sport as a forum for teaching life skills in at risk populations.

Intervening with athletes to manage debilitating forms of perfectionism

HALL, H. (York St John University)

In the last decade research into perfectionism in sport has begun to emerge (e.g. Appleton, Hall & Hill, 2009; Dunn, Gotwals & Dunn, 2005;

Hall, 2006; Hill, Hall, Appleton & Kozub, 2008; Stoeber, Stoll, Pescheck & Otto, 2008). Considerable evidence suggests that while perfectionism may energise achievement striving, and lead to positive performance outcomes it also has the potential to lead to performance impairment and engender considerable psychological distress. Despite the emergence of empirical literature that has begun to examine factors which may either mediate or moderate the influence of perfectionism in sport, few authors have identified intervention strategies to prevent its maladaptive consequences. Clearly, the development of sound interventions that attempt to address the debilitating effects of perfectionism must focus upon those psychological mechanisms which have identified why striving for exceedingly high goals may have problematic consequences. Therefore, the purpose of this paper is to utilise current evidence from motivational theory to identify potential intervention strategies that will aid in the management of perfectionism with athletes. The paper will employ the tenets of achievement goal theory (Ames, 1992; Nicholls, 1989) to explain why manipulating the achievement climate to foster task involvement and reduce ego involvement will be effective in reducing a focus on failure avoidance, and contingent self-worth, thought to be key energizers of perfectionism (Hewitt & Flett, 1991). Evidence from work on athlete burnout (Hill et al, 2008) and the development of perfectionism in children (Appleton et al, 2009b) suggests that this strategy may also be effective in facilitating unconditional self-acceptance and alleviating perfectionistic cognitions. Potential interventions which focus on the achievement climate perceived to be created by parents, coaches and peers will also be examined as all these agents have been implicated in the development of perfectionism with young athletes (Appleton et al 2009b; Flett & Hewitt, 2002). Further suggestions for intervention will also be based upon the tenets of self-determination theory. This is because debilitating forms of perfectionism are considered to be underpinned by perceptions of external control over achievement outcomes. Therefore, strategies to facilitate

autonomy support may be particularly relevant in the management of perfectionism.

Keywords: *perfectionism, sport, motivational theory, performance, goals*

Social factors and motivational mechanisms influencing optimal functioning in youth sport: Intervention directions

BALAGUER, I. (University of Valencia)

It has been proposed that organized sport is a powerful context holding implications for the psychosocial development and optimal functioning of young people. Whether such objectives are obtained is also assumed to be specifically a function of the motivational dynamics operating in the sport setting at hand. Based on the achievement goal frameworks (e.g., Ames, 1992; Nicholls, 1992) and Self Determination Theory (Deci & Ryan, 1985; Ryan & Deci, 2000), research has indicated that the degree to which the psychological environments created by coaches are more or less positive correspond to variability in the satisfaction of basic psychological needs, autonomous versus controlling motivation and well-being of young athletes. There is also theoretical and empirical guidance regarding the characteristics of the social environment that should be more adaptive for youth sport participants. Specifically, it would seem that a task-involving rather than ego-involving climate and autonomy supportive rather than controlling environment should promote the quality of children's engagement in sport. In this presentation and pulling from the two theoretical frameworks, findings emanating from our research with young Spanish sport participants and related work will be reviewed. These studies have involved children at both the recreational and elite levels in both individual and team sport. I will then turn to the implications of this research for the design and evaluation of interventions aimed at fostering optimal functioning in youth sport.

Keywords: *sport, psychosocial development, motivational dynamics, achievement goal frameworks, Self Determination Theory*

The PAPA Project: A theory-based intervention centred on the promotion of an empowering motivational climate for young European football players

DUDA, J. (University of Birmingham)

Within the presentation, I will describe the collaborators in, background to and focus of the European Commission FP7 funded PAPA project (Promoting Adolescent Physical Activity; www.projectpapa.org). This is a 4-year research project entailing the development, implementation and testing of a theoretically-grounded youth coach training program aimed at creating an empowering psychological environment (more specifically, a motivational climate that is task-involving and autonomy supportive) in the context of youth football. A key assumption undergirding the PAPA project is that youth sport program hold implications for public health. The intervention will be developed and piloted in the UK and then all materials will be translated for implementation in France, Greece, Norway and Spain. A large multi-site trial will follow involving over 80 teams (and their coaches) and more than 1200 boys and girls between the ages of 10-14 years in the 5 countries. At baseline, the end of the season as well as at the start of the following season, a number of outcomes will be assessed including children's health behaviours (e.g., physical activity, substance use), motivation for sport participation, indicators of well-being (e.g., self esteem, enjoyment) and continued involvement in football. Comparisons between the coaches and players in the intervention arm and those coaches/players involved in the standard provision of youth football will also be made. Results stemming from the preliminary pilot work will also be shared.

Keywords: *promoting adolescent physical activity, training programs, well-being, motivational climate, football*

Combating HIV/AIDS in Sub-Saharan Africa: Introducing mastery motivational strategies in a life-skill intervention in a community based sport program

ROBERTS, G. (Norwegian University of Sport Science)

The research reported in this study investigated whether mastery motivational strategies could enhance the effectiveness of a life-skill intervention for HIV/AIDS education through sport. A quasi field experimental study was conducted in Tanzania with 764 at-risk children randomly grouped into two intervention groups and two control groups. The intervention groups received AIDS education using trained peer coaches in football in a community based sport program, with one group having peer coaches trained in specific mastery strategies. Children in the intervention groups all reported significantly greater HIV knowledge, and positive attitudes and safe-sex behavioural intentions than the control groups. The mastery motivational strategies reliably enhanced risk reduction for most of the behavioural intention variables (e.g., intended condom use). When we used canonical correlation analysis with the intervention groups, the analysis revealed meaningful relationships between the mastery motivational strategies and the behavioural intention variables. The life-skill intervention through sport for HIV risk reduction was effective, and mastery motivational strategies enhanced that effectiveness.

Keywords: motivational strategies, HIV/AIDS, sport, peer coaches, community based sport program

Multicultural counseling competency: Research and training issues in the U.S

Chair(s): SHEU, H. B. (Arizona State University)

The purpose of the symposium is to introduce the current status of the multicultural counseling and training literatures as well as the findings of three empirical studies conducted in the United States. With globalization and human migration, the populations in countries, such as Australia and the U.S., have become more and more diverse in terms of race/ethnicity and cultural backgrounds. This unstoppable trend suggests that the training of multiculturally competent practitioners play a crucial role in delivering effective mental health services to such diverse populations. The first presentation of this symposium will provide an overview of the multicultural counseling competency (MCC) model and its contributions to counselor training in the U.S. A rationale for the subsequent three empirical studies will also be offered. The second presentation focuses on results of a study that was designed to test a new multicultural training model for counseling graduate students. Based on social cognitive theory, this model consists of variables (e.g., multicultural counseling self-efficacy) hypothesized to predict intention of providing counseling to racially diverse clients. The third presentation describes the process of developing a novel instrument designed to tap the concept of MCC from the consumer's (i.e., the clients') perspective. Finally, the fourth presentation will introduce a study that explores seasoned counseling practitioners' experiences of working with diverse populations. Together, the four presentations will provide the audience with a complete picture of multicultural training models and issues as well as empirical efforts on this topic in the U.S. Implications for cross-cultural validity of the training models and empirical evidence will also be discussed. The learning objectives of this symposium are: (1) Participants of the symposium will gain knowledge about the current status of the multicultural counseling and training literatures

in the U.S. (2) Participants will acquire understanding of empirical findings that support a new multicultural training model for counseling graduate students. (3) Participants will gain knowledge about how consumers (i.e., clients) perceive their counselors' multicultural counseling competencies. (4) Participants will familiarize themselves with training issues faced by and experiences of mental health professionals who provide services to racially diverse populations.

Multicultural counseling competency and training: A review of the literatures in the U.S.

SHEU, H. B. (Arizona State University)

The purpose of the presentation is to provide an overview of the literatures on multicultural counseling competency and training in the United States. Since the landmark call for action within the field of psychology to address the needs of the increasingly diverse population in the U.S. (Sue et al., 1981), researchers, educators, and clinicians have debated the scope and assessment of multicultural counseling competency as well as the best methods of implementing training. Traditional counselor training has been monocultural based on the majority group's psychological experiences without consideration of how racial/cultural minorities may seek help and benefit from counseling in different ways (Sue, Ivey, & Pedersen, 1996). To facilitate the training of culturally competent mental health professionals, the model of Multicultural Counseling Competency (MCC) was proposed by a group of researchers (Sue, Arredondo, & McDavis, 1992) in the U.S. Specifically, the MCC model encompasses three characteristics of counselors' awareness of their own cultural values, understanding of the worldviews of clients, and developing culturally appropriate interventions across three dimensions – knowledge, awareness, and skills. The MCC model has served as the cornerstone of graduate training in counseling-related disciplines. A general review of the multicultural counseling and training literatures in the U.S. will be conducted, which will serve as the foundation for discussion about the development of multicultural

counseling competency, effective multicultural training models, and different training issues faced by graduate students in counseling-related programs and seasoned mental health professionals in the field. This review will also pave the way for the subsequent three empirical studies designed to explore topics related to multicultural counseling competency and training from diverse perspectives. In short, this presentation will summarize the current status of the multicultural counseling and training literatures in the U.S. Cross-cultural applicability of multicultural training models will also be discussed.

Keywords: multicultural counselling competency, culture, interventions, training, cultural minorities

A training model for increasing counseling trainees' intent to work with racially diverse populations

RIGALI-OILER, M. (Arizona State University)

Although Multicultural Counseling Competency has been discussed in the American literature for decades, empirically-supported and effective multicultural counseling training models have not yet been proposed. With the increasing diversification of the U.S. population, it is essential that students in counseling graduate programs are both competent and interested in working with racially diverse populations. In an effort to predict future decisions to work with racially diverse clients, a multicultural counseling training model, based on social cognitive theory, was proposed for the current study. Specifically, factors such as previous mastery experience (i.e., direct counseling hours with racially diverse clients), perceptions of multicultural environments, multicultural counseling self-efficacy, outcome expectations, and interests were used to forecast future choice goals of providing mental health services to racially diverse populations. Data was collected from 205 graduate students in counseling-related programs in the U.S. Among the participants, the majority was female (71%). The racial breakdown of the sample is similar to national demographics of counseling trainees in the U.S., which included 57% White American, 8% African American, 13% Asian American/Pacific Islander, 5% Latino/a

American, 8% Multiethnic, 8% International, and 1% reported being in other racial groups. Findings of structural equation modeling techniques showed that the hypothesized model produced a good fit to the data. Specifically, previous direct contact hours with racially diverse clients were predictive of multicultural counseling self-efficacy. Self-efficacy and outcome expectations both produced significant paths to interests in multicultural counseling, which, in turn, was a predictor of future intent to counsel racially diverse clients. Also, the effect of participants' perceptions of multicultural training environments on their intent to serve this population was mediated by multicultural counseling self-efficacy and interests. Results of the study provided initial evidence for the proposed multicultural counseling training model. Social cognitive variables, especially multicultural counseling self-efficacy and interests, may play a vital role in facilitating counseling trainees' decision to serve racially diverse clients in the future. Implications for counselor training and caveats for applying this model to training programs in other cultures will be discussed.

Keywords: multicultural counselling competency, multicultural counseling training, multicultural environments, social cognitive theory, racially diverse populations

Client perception of counselor multicultural counseling competencies and its relations to counseling outcomes

SHEU, H. B. (Arizona State University)

Counselor multicultural counseling competencies (MCC) have received much conceptual and empirical attention in the counseling literature. While measures have been developed to assess this construct from the counselor's perspective, researchers have yet to study how clients may perceive their counselor's MCC and how the perceptions may predict the clients' counseling outcomes. The purpose of this presentation is to outline the process of developing the Client Perceptions of Counselor Multicultural Counseling Competencies Scale (CPCMCCS) in the U.S. We will examine clients' perceptions of their counselor's MCC and how such perceptions

relate to client variables (e.g., positive/negative affect, ethnic identity) and counseling outcomes (e.g., client satisfaction). Different methods were utilized to develop the item pool for the CPCMCCS. Semi-structured interviews were conducted by a research team with four racially diverse clients about their cross-racial counseling experiences. The research team revised existing MCC measures that were developed from the counselor's perspective and reviewed relevant literatures in the U.S. to generate additional items. Research team members also suggested items based their own clinical experiences. Items were then categorized by common themes and redundant items were eliminated. Based on this procedure, the CPCMCCS was hypothesized to include a general counseling component and a multicultural counseling component with five subcomponents: (1) client self-exploration and connection between culture and presenting issues, (2) cultural differences and conflicts between counselor and client, (3) culturally-appropriate goals and interventions, (4) culturally-relevant resources, and (5) counselor's cultural knowledge and stereotypes. The 67-item CPCMCCS test version was then revised again according to feedback from another five racially diverse clients. A sample CPCMCCS item includes, "My counselor helps me set counseling goals that are consistent with my cultural values." Participants are asked to rate the frequency and perceived helpfulness of each item (i.e., counselor behavior) on a 5-point scale. An online survey containing the CPCMCCS and measures on client variables and counseling outcomes has been developed. Data will be collected in Spring 2010 from 200 clients who have received counseling in the past six months. Results of the study and directions for training, practice, and research will be discussed at the conference.

Keywords: multicultural counselling competency, racially diverse clients, counselling, ethnic identity, cultural diversity

Exploring predictors of multicultural counseling experiences of mental health practitioners

MEJIA, A. (Arizona State University)

Several theories have been developed to explain how American counselors can effectively work with racially/ethnically diverse communities (Sue, Arredondo, McDavis, & Roderick, 1992). Many of these theories have influenced multicultural counseling training in the United States (Helms, 1995). These perspectives have been primarily derived from the experiences of graduate students at the early stage of their training. Despite the multitude of investigations, limited information is available on how seasoned mental health professionals and advanced counselor trainees perceive their self-efficacy in delivering multicultural counseling services to racially diverse clients. Thus, the purpose of this presentation is to expand the research on multicultural training by incorporating the experiences of clinical practitioners and advanced trainees. This investigation is designed to examine the experiences and perceptions of professional helpers' (i.e., psychologists, social workers, psychiatrists) and advanced counselor or psychology interns' ability to deliver multicultural counseling in the U.S. Specifically, the study explores variables (i.e., previous training and clinical experiences, perceptions of multicultural environments, multicultural counseling self-efficacy, outcome expectations and interests) that are hypothesized to predict outcomes (i.e., intention of conducting multicultural counseling, job satisfaction) for practitioners and advanced trainees. Professional helpers will be recruited from community mental health agencies, hospitals, schools, counseling centers and professional list serves. An online survey consisting of measures on aforementioned predictors and outcomes is already developed, and data collection will be conducted in Spring 2010. Complete results of data analysis will be available by April 2010. It is anticipated that the findings will expand our understanding of how mental health professionals develop their interests in and intentions of providing services to racially diverse clients. Results of the study will also inform how we can better design continuous education programs for practitioners. Findings and directions for future research will be discussed in light of the development of multicultural counseling competence post graduate training.

Keywords: multicultural counseling training, multicultural counseling services, racially diverse clients, multicultural environments, multicultural counseling self-efficacy

Multi-level effects of motivation, emotion, and cognition on performance: Recent theoretical, empirical, and methodological advances

Chair(s): VUCKOVIC, A. (The University of Queensland)

Discussant(s): FISHER, C. (Bond University)

Researchers and practitioners alike recognise that performance is influenced by a combination of motivational, emotional, and cognitive factors (Seo, Barrett, & Bartunek, 2004). These intertwined processes are thought to fluctuate within individuals over time (Illes & Judge, 2005). However, research has traditionally examined these factors in isolation, and treated them as stable processes by using between-person and simple pre-post designs (Fried & Slowik, 2004). This disconnect between theory and methodology creates an ecological fallacy, the significance of which is underscored by recent research demonstrating that a misspecification of levels can lead to erroneous conclusions (e.g., Vancouver et al., 2001). This symposium presents the initial progress on a program of work designed to integrate the study of motivation, emotion and cognition. As such, our work advances prior research in three ways. First, our work recognises that motivation, emotion, and cognition can vary at multiple levels of analysis. Accordingly, we examined these factors repeatedly over time as well as between individuals. Second, our symposium as a whole takes an integrated approach to examining motivational, emotional, and cognitive determinants of performance. Third, the studies presented here harness the benefits of high experimental control and psychological fidelity via an Air Traffic Control (ATC) micro-world in order to enhance external validity (Highhouse, 2009). As such, results are expected to generalise to tasks that require skills such as dynamic decision-making, relative distance judgments, maintaining vigilance and situation

awareness, tradeoffs between speed and accuracy, and high workload (Yeo, Sorbello, Koy, & Smillie, 2008). Presenter 1 will consider the cognitive strategies involved in an ATC task, and how perceptions of potential collisions change over time and affect performance. Presenter 2 will report a multi-level analysis of the structure of affect within the context of complex skill acquisition. Presenters 3 and 4 will present studies that integrate motivational, emotional, and/or cognitive factors in a medium-fidelity ATC task.

A cognitive perspective on Air Traffic Control (ATC) task performance

VUCKOVIC, A. (The University of Queensland)

A number of studies have examined the factors influencing Air Traffic Control (ATC) conflict detection performance (Law et al., 1993; Remington, Johnston, Ruthruff, Gold, & Romera, 2000; Stankovic & Raufaste, 2008). Most of these studies assessed accuracy and response time as a function of the geometry and timing of the conflict (Xu, 2003). Although this research tells us what information is required to perform the task, it does not explain how this information is processed (Xu & Rantanen, 2003). Research shows that controllers will use various cognitive strategies to minimise workload and achieve effective performance (Loft, Sanderson, Neal, & Mooij, 2007). This study aims to examine the dynamic decision making process and the role of strategy in conflict detection performance. Thirty-one first year psychology students participated in a highly-controlled, low-fidelity simulation of the ATC conflict detection task (Fothergill, Loft, & Neal, 2009). We used a fully-crossed within-subjects design. Participants were presented with a series of trials showing pairs of aircraft converging on a crossing point. Aircraft would either conflict or pass safely, converge on an acute or an obtuse angle, and would be shown at different time points in their trajectories. The participant's task was to estimate the potential likelihood of a conflict between the aircraft. The measures of performance were conflict likelihood responses and response times. Two types of cognitive strategies were assessed including the Distance to Velocity ratio and the Cognitive

Motion Extrapolation. Performance outcomes were first examined as a function of the independent variables. The results showed a complex pattern of findings where conflict likelihood responses and response times changed over time. In order to make sense of these findings, a Dynamic Signal Detection Analysis (Balakrishnan, Busemeyer, MacDonald, & Lin, 2003) was performed. The results indicated that performance was the result of a dynamic decision making process that could be accounted for by a Distance to Velocity ratio strategy. These findings highlight the need to examine the dynamic processes responsible for conflict detection performance. These findings also stress the importance of assessing the controller's strategy as a way to understand the cognitive process driving the controller's decisions.

Keywords: *air traffic control, performance, decision making, conflict, response times*

Measuring emotions throughout skill acquisition: A multi-level analysis

GEE, P. (The University of Queensland)

Although affect is recognised as a determinant of performance, there is disagreement regarding its structure and measurement (Beal, Weiss, Barros, & MacDermid, 2005). Researchers agree that valence and activation are dimensions of affect (Yik, Russell, & Barrett, 1999). However, some form these into two bipolar dimensions (Barrett & Russell, 1998) whereas others form them into two unipolar dimensions (Watson & Clark, 1997). There have also been calls to align theory with measurement by examining within-person fluctuations in affect over time (Beal et al., 2005). This study examined the structure of affect at the within and between person levels of analysis in the context of complex skill acquisition. In parallel, we assessed the validity of a succinct bipolar measure of affect. A total of 59 university students completed eight five-minute trials of a simulated Air Traffic Control task. The UWIST Mood Adjective Checklist (Matthews, Jones, & Chamberlain, 1990) was presented on trials two, four, six, and eight; in addition to three newly developed single-item bipolar scales (tense arousal, energetic arousal, and hedonic tone). Preliminary analyses have

been conducted via AMOS. A multi-level confirmatory factor analysis (see Muthen, 1994) was used to test unipolarity versus bipolarity via five models. At the within-person level, all models demonstrated reasonable fit, though some unipolar models had better fit than the bipolar models. The factor loadings and interfactor correlations also suggested unipolar response patterns. At the between-person level, the fit indices were less than ideal across all models. However, the factor loadings and interfactor correlations suggested bipolar response patterns. When simultaneously compared at the within- and between-person levels, the bipolar models had better fit than the unipolar models. These preliminary findings suggest that the structure of affect may differ across levels of analysis. A unipolar structure seemed most appropriate at the within-person level, whereas a bipolar structure emerged at the between-person level. Empirically, this is one of the first studies to conduct a multi-level analysis of affect. These findings have also raised theoretical and practical implications on how we should conceptualise and measure affect.

Keywords: *affect, performance, skill acquisition, UWIST Mood Adjective Checklist, air traffic control task*

The role of affect in goal setting and goal striving: A multi-level analysis

BALLARD, T. (The University of Queensland)

Affect influences motivation both directly and indirectly through cognitive activities such as goal setting. There is evidence to suggest that the direct influence of affect on motivation during goal striving may differ to the indirect effect through goal setting (Foo, Uy, & Baron, 2009; Ilies & Judge, 2005). Goal setting and goal striving represent different levels of analysis because, goal striving occurs within the context of a goal (Vancouver, 2005). However, previous research has failed to draw this distinction. The purpose of this study was to develop an integrated understanding of how affect influences cognitions, motivation and performance across levels of analysis. A total of 105 participants completed a medium fidelity conflict resolution task from the Air Traffic Control micro-world (Shayne Loft, Hill,

Neal, Humphreys, & Yeo, 2004) which required them to accept aircraft entering the sector and resolve conflicts. Participants completed ten 10-minute trials, setting a performance goal before each trial. Effort was measured five times within each trial along with the bipolar measures of tense arousal, energetic arousal and hedonic tone validated in the previous study. Multilevel modelling was used to examine the relationships between performance, affect and goal at the between-trial level of analysis and performance, affect and effort at the within-trial level. At both the within-trial and between-trial levels, performance was positively related to hedonic tone. The relationship between affect and subsequent goal and effort differed across levels of analysis. At the between-trial level, tense arousal was negatively related to subsequent goal. At the within-trial level, tense arousal and energetic arousal were both positively related to subsequent effort. These results suggest that the direct influence of affect on motivation during goal striving differs to the indirect influence of affect through goal setting. During goal setting, feelings of stress may lead an individual to set a goal that is easier to attain. However, during goal striving, these same feelings may signal that the individual needs to work harder. These findings highlight the need to consider the level of analysis at which motivational and cognitive processes operate before making predictions about the role that affect will play.

Keywords: affect, goal setting, motivation, cognition, performance

Self-efficacy, goals, effort and performance: An examination at two within-person levels of analysis

MCNAMARA, M. (The University of Western Australia)

Self-efficacy refers to cognitive judgements individuals make regarding their ability to perform a given task (Bandura, 1997). The present study integrates the self-efficacy and goal literatures within a motivational framework in an attempt to reconcile conflicting views surrounding the direction of self-efficacy effects on performance. As such, self-efficacy effects on performance were

examined during the goal setting and goal striving phases of self-regulation. Measures of self-efficacy, goal level and effort were taken prior to ten, ten-minute trials of Air Traffic Control (ATC) simulation task to investigate relationships during the goal setting phase of self-regulation. Measures of goal confidence, effort and performance were taken multiple times within each trial to examine relationships during the goal striving phase of self-regulation. Participants were required to accept aircraft and detect and resolve conflicts by changing aircraft flight levels to ensure that minimum separation standards were not breached. Participants received penalty points for making errors – their aim was to avoid penalty points, and as such, the task represented an avoidance motivation context. Multilevel modelling indicated that self-efficacy was beneficially related to performance during the goal setting phase. An increase in self-efficacy from one trial to the next was associated with an increase in performance. Unexpectedly, goal level did not mediate this relationship. Also unexpectedly, self-efficacy had a negative indirect effect on performance during the goal setting phase of self-regulation via effort. An increase in self-efficacy from one trial to the next was associated with a decrease in effort, which in turn decreased performance. Inconsistent with predictions, there was a positive indirect relationship between goal confidence and performance during the goal striving phase via effort. An increase in goal confidence from one time-point to the next within a trial was associated with an increase in effort, which in turn increased performance. These results contribute to the debate between Social Cognitive Theory and Control Theory. For example, the results suggest that both positive and negative self-efficacy effects can occur simultaneously during this phase of self-regulation. These results underscore the importance of examining cognitive and motivational factors simultaneously in multilevel designs.

Keywords: self-efficacy, air traffic control task, performance, goal setting, goal setting

National granted researchers on young adults, success SME entrepreneurs and employee's attributional styles and behaviours

Chair(s): UNGPRA, N. (Thammasart University), PAVAKANUN, U. (Thammasart University)

Discussant(s): GORSANAN, S. (Thammasart University)

The five research issues in attribution and behaviors were funded by the national foundations and related agents in Thailand and Poland. As for the topic related to male's and female's mass media gratification, the research was conducted in Poland. In Thailand, the topics related to students, were conducted on sexual behaviors, love styles, risky sexual behavior, learning methods, and learning achievement. For Thai adults, one research focused on attributional styles of SME Accommodation Entrepreneurs to which affected business success. The other study was related to psychological traits of employees in the Sufficiency Economy Management Organization.

Gender differences in mass media gratification

ROWIŃSKI, R. (Cardinal Stefan Wyszyński University in Warsaw)

According to mass communication statistics it has occurred that there are gender differences in mass media use. The impact of gender is different, and, in almost all cases, women have lesser access to and use of the media. If ICT and telecommunication were gender-neutral, affecting men and women equitably, then special attention to women would not be necessary. As they are not, such special attention is needed. But there is interesting how mass media gratify special needs according to gender. This issue could be

important to understand these differences between women and men. On the basis of U&G Theory from Katz, Blumer and Gurevitch's perspective, (1974) there was an attempt to answer the question whether mass media differ from one another in the ability to gratify personal and social needs. Mass media employ common reasons for media use comprising four fundamental categories by McQuail (2001): information, personal identity, integration and social interaction, entertainment. Moreover, explorations concerned determining the position of the Internet in aspect of functional alternative for traditional media, as well as non-media gratification sources. Data included 500 participants (50% women) who with "paper-pencil" and online method fulfilled the survey forms of the Media Gratification Force (average Cronbach's alpha coefficient for: press - 0,85; book - 0,87; cinema movies - 0,85; radio - 0,90; TV - 0,91; Internet - 0,89; non-media gratification - 0,91). According to McQuail's classification mass media by source can gratify four needs. Results showed that need of integration and social interaction distinguished women and men (statistically significant) for all mass media, without non-media gratification. Also we have observed than entertainment, information and personal identity for some media are statistically significant for gender. Dependent-related statistics have been provided (repeated measurement analysis within mass media gratification and between by gender). It is occurred that interaction effects (type of needs x gender) are also statistically significant. During discussion we try to explain how gender and mass media gratification have got impact on mass media use, especially in scope of telecommunications' statistic.

Keywords: *gender differences, mass media gratification, personal identity, integration, social interaction*

The study of love styles, sex roles, and sexual risk behaviors of undergraduate Thai students in Bangkok

TIEMTANOM, C. (Thammasart University)

Love and sexual behaviors among adolescents have increasingly become critical and brought

social and health problems in Thailand. However, few studies have investigated the relationship between these behaviors, especially in undergraduate students. Thus, the two main objectives of this study were to 1) compare the sexual risk behaviors of the undergraduate Thai students who differ in love styles and sexual roles 2) identify the relationships and the predictors of the sexual risk behaviors by love styles, sexual roles and close friend behaviors. The study combined both quantitative (A survey using LAS (C. Hendrick and S. Hendrick, 1990, TSRI modified from Bem sex role inventory, 1974 and SRBQ) and qualitative methodologies (in-depth interviewed). The sample consisted of 1,093 Thai undergraduate students in Bangkok, separated in 2 groups (having sexual experience $n = 490$; heterosexual males = 254, females = 147, homosexual = 40, and never having sexual experience $n = 603$; heterosexual males = 144, females = 328, homosexual = 14). The results of the study showed that the students who reported themselves never having sexual experience indicated an interaction between love styles and sexual roles on sexual risk behaviors, but not found in the other group. Moreover, love styles, sexual roles and close friend behaviors altogether predicted sexual risk behaviors in both groups of the students. Sexual experience is shown the important influence to the other factors. Sexual risk behavior is to be able to predict by love styles, sexual roles and close friend behaviors.

Keywords: *adolescents, sexual risk behaviour, love styles, sexual roles, close relationships*

Learning methods affecting learning achievement of undergraduates at King Mongkut's Institute of Technology North Bangkok

BOOTSAKSRI, P. (King Mongkut's Institute of Technology North Bangkok)

The aim of the current study was to compare the learning methods toward learning achievement; personal characteristics toward learning achievement; and self-efficacy toward learning achievement. The subjects were 181 undergraduates enrolled in Human Relations course in the first semester of the academic

year 2006. The subjects were assigned purposively to two experimental groups (each has 83 and 30 students respectively) and a control group (68 students). The research instruments were questionnaires collecting personal data, former learning achievement test, self-efficacy scales (alpha coefficient = .7477) and learning achievement test score. The t-test and one-way Analysis of Variance were used in data analysis. The findings were as follows: 1. the learning achievement scores of students tested after each session and one week before midterm and final examinations were significantly higher than the other groups at the .05 level; 2. the learning achievement scores of female students were significantly higher than that of male students at the .05 level; 3. the learning achievement scores of students in different majors were significantly different at the .05 level; 4. the learning achievement scores of students in different educational backgrounds were significantly different at the .05 level; 5. the learning achievement scores of students in different levels of self-efficacy were significantly different at the .05 level; 6. attendance in each session had no effect on learning achievement. Female yield the higher scores than male do. Most of the findings satisfied the hypothesis, except the attendant.

Keywords: *learning methods, learning achievement, personal characteristics, self-efficacy, gender differences*

Attributions and relationships of entrepreneurial orientation, human capital, and business success of SME accommodation entrepreneurs in successful provinces of tourism Thailand

PAVAKANUN, U. (Thammasart University)

The purposes are to study the attributions and the relationships of Entrepreneurial Orientation, Human Capital, and success of Entrepreneurs and to develop the prediction equation to entrepreneurial success by such factors. Subjects are 535 SME Accommodation Entrepreneurs the most successful provinces from six parts. The measurement instruments are individual structured interviews and questionnaires. Statistical analysis tools include frequency, percentage, mean, standard

deviation, Pearson's Coefficient of Correlation and Stepwise multiple regression analysis. The study found that the majority of subjects are 34-44 year-old Bangkokians with equal proportion of both sex. Most subjects are entrepreneurs in accommodation business. Most of them were ex-employees and have been running their own business since 1997 (Most), 1992 (some), 1986 (some), with starting investment of more than 1 million bath. The inspiration of career came from relatives' business success. More than 31 employees worked in an organization that sets short-plans for every position. No more than 50 hours per week is the average working hours of an entrepreneur. With regard to Entrepreneurial Orientation, it is found that the entrepreneurs have autonomy, need for achievement, and stability and learning at a considerably high level while risk taking, innovativeness, and competitive aggressiveness are at a medium level. With regard to human capital, it is found that most of the entrepreneurs hold Bachelor's Degree. Nevertheless, they have skills and experience in management at a considerably medium level. The entrepreneurs are generally successful at a high level, following by medium level. Surprisingly, few entrepreneurs have achieves, their success at a low level. With regard to the relationship of entrepreneurial orientation, human capital, and Success, the style of Entrepreneurial Orientation in Autonomy, Innovativeness, stability and Learning, and achievement, and human capital in management and career skills have all positively correlated with success. The predicting equation shows that innovativeness, achievement, autonomy, of entrepreneurial orientation, and experience in management could predict success at 8.8%, with the error of 6.4247. Business success can be influenced by the entrepreneurial orientation, and the human capital.

Keywords: attribution, entrepreneurial orientation, human capital, entrepreneurial success, risk taking

The effect of the sufficiency economy on the psychological trait of the employee in the sufficiency economy management organization

KHUMBUNARAK, T. (Human Resource Institute, Thammasart University)

The purpose of this research is to present the role and concept of the sufficiency economy in Thai society and the application of this concept to organizations. Furthermore, this research will also study psychological traits and make comparison between personnel who work in sufficiency economy organizations and organizations which are managed by other concepts. The samples used are from 400 personnel employed by organizations which have embraced the sufficiency economy concept as well as other organizations that do not rely upon the sufficiency economy system. For 93.8% of the samples were obtained by 375 questionnaires distributed to these companies. Personnel who work in the sufficiency economy concept organizations apply the concept at individual and organizational levels more than personnel who work in non-sufficiency economy organizations. Personnel who work in the sufficiency economy concept organizations apply the sufficiency economy concept to rational factors, immunity factors and overall sufficiency economy factors more than personnel who work in non-sufficiency economy organizations. Personnel who work in the sufficiency economy concept organizations had less future oriented – self control, self efficacy psychological traits than personnel who work in other organizations. There were positive relationships between future oriented – self control and individual levels of sufficiency economy, abstinence, immunity and overall sufficiency economy. Self efficacy associated positively with individual levels of sufficiency economy, abstinence and overall sufficiency economy. Moreover, there were positive relationships between rational and immunity. There were negative relationships between Machiavellian personality and organizational level of sufficiency economy, abstinence and overall sufficiency economy. Furthermore, there were correlations with individual levels of sufficiency economy and rational. Internal locus of control correlated positively with all factors of sufficiency economy. There were positive relationships between ethical rationalization that related to these factors of sufficiency economy: organizational level of sufficiency

economy, abstinence, rational, immunity and overall sufficiency economy. All factors of sufficiency economy had a positive correlation with overall psychological traits. Most hypotheses are accepted.

Keywords: *sufficiency economy, psychological traits, self control, self-efficacy, internal locus of control*

Natural products as cognitive enhancers

Chair(s): SCHOLEY, A. (NICM Centre for Neurocognition, Brain Sciences Institute, Swinburne University)

Pharmacological approaches to cognition enhancement have important ramifications for the discipline of psychology. The area has clinical applications in the field of dementia and other conditions where cognition is fragile either due to direct pathological change or secondary effects of, for example, fatigue or stress. Furthermore there is increasing interest in the notion that cognition may be enhanced even in cognitively intact individuals. This symposium will draw on leading international experts in the field of natural medicines and behaviour. It will take an evidence-based approach to natural medicines and cognitive enhancement. The symposium will firstly set out the theoretical reasons for using a polypharmacological approach to cognitive enhancement. Material will be presented challenging whether current therapeutic strategies for Alzheimer's disease are adequate and will then systematically review promising evidence for plant-based therapies in the context of dementia. Further talks will focus on one specific herbal extract – *Bacopa monniera* – to illustrate the range of methodologies which have been used to assess the cognitive enhancing properties of this plant. Finally the challenges which arise when developing standardized natural products for behavioural outcomes will be explained. Key learning objectives include: an understanding of the nature of cognition enhancement; knowledge of theoretical issues surrounding human cognitive function in the context of its enhancement; an understanding of the issues and challenges surrounding effective treatment for cognitive decline; knowledge of the range of methodologies used to assess potential cognitive enhancers and anti-stress agents; and an understanding of the challenges involved in development of cognitively active natural medicines.

Why do natural products act as neurocognitive enhancers?

SCHOLEY, A. (NICM Centre for Neurocognition, Brain Sciences Institute, Swinburne University)

Over the past decade or so there has been a substantial increase in research into the effects of herbal extracts, including their potential to protect against cognitive decline. Unlike mainstream 'magic bullet' pharmaceuticals, such extracts may contain dozens of active components. It appears that some have these may have evolved with a combination of properties which, in concert, may affect multiple neuronal, metabolic and hormonal systems. Since cognitive processes are themselves modulated by such systems, the effects of herbal extracts may particularly depend upon complex interactions within and between physiological systems which underlie cognitive performance. This talk will describe a systematic assessment of the behavioural effects of herbal extracts with particular relevance to cognitive decline and enhancement. These have been selected on the basis of their historical or anecdotal use as agents which may influence mood and cognitive performance. Those assessed include Ginkgo, Ginseng (Asian and American), Melissa *Officinalis* (Lemon balm), and species of *Salvia* (Sage). All studies reviewed have used double-blind, placebo controlled, methodology in which the behavioural effects of several doses of standardized extracts were assessed. The results indicate that many herbal extracts are capable of modulating cognitive performance, often in ways which are strikingly in keeping with their traditional use. For example sage, ginseng and ginkgo have repeatedly been shown to improve memory and lemonbalm exerts anti-stress effects. This work is in its infancy but may uncover promising candidates for maintenance of wellbeing and mental health throughout the lifespan and even treatments for conditions where mental function becomes fragile – including during ageing and in dementia. Additionally, the notion that the human cognitive performance can also be improved in cognitively intact individuals both challenges prevailing views of brain function and has important applications in many areas of psychology.

Keywords: *herbal extracts, dementia, cognitive processes, cognitive performance, memory*

Phyto-therapeutics for cognitive enhancement, behavioural and psychological symptoms associate with Alzheimer's disease (AD)

OKELLO, E. (Medicinal Plant Research Group, Newcastle-upon Tyne)

Currently there is no cure for Alzheimer's disease (AD). It is an irreversible, progressive brain disease. Existing treatments, based on the so called cholinesterase inhibitors (e.g. Tacrine, Revastigmine, Donepezil, Galanthamine) and various neuroleptics are aimed at treating the symptoms. These symptom include cognitive dysfunction, primarily; memory loss, language deficit, depression, agitation, anxiety, and in some cases psychosis. However, like many synthetic drugs, the benefits of AD treatments are accompanied by some unwanted side effects such as liver toxicity, anorexia, diarrhoea, nausea and vertigo, with a number of queries on costs effectiveness and safety. Current developments in the search for novel treatments include those that seek to slow down the progression of the disease or indeed prevent its onset. These include natural products with antioxidants, anti-inflammatory, cholesterol lowering and estrogenic properties. Many herbal products or nutraceuticals possess these properties and their uses are increasingly guided by standardized preparations, evidence of scientific mechanisms and clinical trials. I aim to review the evidence supporting the use of phyto-chemical based therapies for cognitive enhancement and treatment of behavioural and psychological symptoms associated AD. The paper will provide a review of published data as well as new data into plant extracts with mechanisms relevant to the treatment of dementia. A number of plant based products show great potential in their use for complementary inclusion in the treatment of various symptoms associated with AD. A number of plant based products are providing us with new therapeutic leads for the prevention or treatment of dementia and other psychiatric disorders. Their clinical efficacy, safety and mechanisms accounting for

the improvement in some of the symptoms associated with dementia are increasing being reported in well designed scientific studies.

Keywords: *Alzheimer's disease, progressive brain disease, cognitive dysfunction, phyto-chemical based therapies, dementia*

The rejuvenating and memory enhancing properties of the standardized extract of the Ayurvedic medhya - rasayana plant *Bacopa monniera*.

SINGH, H. (Central Drug Research Institute, Hygia Institute of Pharmaceutical Education & Research, Lucknow)

Bacopa monniera is an extremely important Ayurvedic plant used as *medhya-rasayana* (rejuvenating and memory enhancing) in India since the time of Vedic civilisation. The "threesome" of *Ayurveda*, viz. *Charak*, *Sushruta* and *Vagbhatta* have attributed many psychoneuropharmacological properties to *bacopa*, e.g., augmenting learning and memory, prolonging life span, anti-anxiety and have prescribed it to be used in various neurodegenerative disorders which are akin to cerebral atrophy, Alzheimer's disease (total loss of memory) and clinical cognitive disturbances like obsessive compulsive disorders, parkinsonism and multi infract amnesia. It was also prescribed for treatment of major psychiatric disorders like insanity and morbid anxiety. Extensive research has confirmed these traditional claims of *bacopa* and also to find new therapeutic properties. A standardized extract of the plant having an optimum memory enhancing effect was developed and designated as CDRI-08. In animal studies, CDRI-08 showed a significant improvement in all the three phases of learning, i.e. short-term, intermediate and long-term memories by significantly augmenting the consolidation, acquisition and retention processes. CDRI-08 also showed pronounced anti-amnesic, neuroprotective, anti-oxidant, anti-stress and adaptogenic effects. Having confirmed the safety of the extract in regulatory toxicity studies, clinical trials were conducted in children and adult human volunteers. In children, CDRI-08 increased the raw score and decreased error, reaction and performance times in Wisc Maze

test. It also augmented digit forward, digit backward and raw scores in Digit Span Test. In children suffering from Attention Deficit Hyperactivity Disorder (ADHD), CDRI-08 significantly improved sentence repetition, logical memory and digit span tests scores. In the patients suffering from anxiety neurosis, CDRI-08 significantly reduced insomnia, tremors, irritability, nervousness and anxiety and increased mental fatigue - work output ratio. In the subjects suffering from Age Associated Memory Impairment (AAMI), CDRI-08 significantly enhanced mental control, logical memory, digit forward, digit backward and paired associate learning. In elderly subjects (55-70 years), the CDRI-08 significantly enhanced the oxygen intake capacity, haemoglobin counts, and provided symptomimetic relief in low back pain and sciatica. The CDRI-08 offers a potential therapy for the treatment of cognitive impairment, stress, anxiety and overall improvement in general well-being.

Keywords: *memory, Bacopa monniera, Ayurvedic plant, neurodegenerative disorders, CDRI-08*

Evaluating the cognitive effects and mechanisms of *Bacopa*.

STOUGH, C. (NICM Centre for Neurocognition, Brain Sciences Institute, Swinburne University)

Bacopa monniera or *brahmi* has been traditionally used for centuries to improve cognitive functioning. More recently there has been a great deal of in vitro and in vivo animal research focusing on its neurochemistry and mode of action. In this presentation I discuss research on *brahmi* in both animals and in human trials assessing neurocognitive functioning. I start off with a brief discussion of the mechanisms of action of *brahmi* generating hypotheses about its action on the human brain and on human cognition/ intelligence. A review of available human clinical trials including their samples, outcome measures and conclusions is then presented. Data from two chronic and one acute study are presented. The methodology of these studies follow standard randomized controlled trial procedures, in which double blinding is utilized. Across the three studies, approximately 200 participants aged from 18

to 70 have been enrolled. All participants completed significant neuropsychological and cognitive test batteries at baseline and 3 months for the 2 acute studies and baseline and at 3 hours for the acute study. Results indicated consistent cognitive improvements in memory and information processing in the chronic studies. Additionally some evidence for an anxiolytic effect was observed in both chronic and acute studies. The results of the studies suggest that chronic administration of bacopa may improve cognitive functioning and decrease anxiety. These results may be particularly important in groups showing cognitive decline such as in the elderly. The results of these studies are discussed in terms of future trials and mechanistic studies.

Keywords: *Bacopa monniera*, cognitive functioning, neurochemistry, information processing, memory

factors. Clinical, toxicological and pharmaceutical evaluation can insure the safety and efficacy of herbal medicines, but trial results are specific to the preparation researched. Particularly within the evaluation of the cognitive effects of herbal extracts, results can easily vary depending on many factors, therefore it is one of the most challenging health areas in evidence based herbal medicine.

Keywords: *safety, herbal extracts, cognitive functioning, psychopharmacology, medicinal research*

The challenges of evidence based herbal medicine

ZANGARA, A. (Flordis Natural Medicines/Swinburne University/Newcastle University)

Assessing the safety and efficacy of medicines, whether conventional or herbal, is a continuous challenge from pre-clinical to clinical phases of research. However, evidence based herbal medicinal research presents unique problems and challenges to the researcher and the producer, who must be well aware of in order to safeguard the quality of the data obtained and quality of the products on sale. Herbal preparations for cognitive functions, as for any other health areas, can vary considerably in their effects and safety if the process from 'seed to patient' is not properly controlled and reproduced into the future. The psychopharmacology of herbal products delivered through a complex mix of bioactive components presents many challenges: the quality of raw materials; processing, manufacturing, and clinical study designs and outcome measures. Besides, "bioequivalence" is difficult or impossible to achieve with herbal products due to their chemical complexity. The variability that can occur at any stages of herbal medicines development is due to many controllable

Navigating the stresses and strains of women's lives: Advice from applied psychology research

Chair(s): HALL, R. (The College of New Jersey)

Discussant(s): DENMARK, F. (Pace University)

The purpose of this symposium is to bring together researchers who are interested in solutions to social problems in women's stressful daily lives. The problems in question include a chilly workplace climate, work-family balance, interpersonal and routine health concerns, and developmental challenges in mid-life. The authors report the results of qualitative and quantitative studies and literature reviews, with a focus on solutions. Implications of the research for institutional and public policy and for therapeutic interventions are discussed by the presenters and our discussant. Among the strategies we present are ways to develop women's careers and leadership potential on the job, ways to re-conceptualize gender role identities and challenge societal demands, ways to cope with common health symptoms and learn to express one's desires honestly, and ways to use religion and spiritual values to frame positive development in the second half of life. The presenters come from the U.S. and Israel; all are experts in the psychology of women and gender, as are our chair and discussant.

Career and leadership strategies for women in academe

ROSE, S. (Florida International University)

The goals of the present research were twofold: (a) to describe issues contributing to a continuing chilly climate for women in academe; and (b) to identify successful strategies to develop women's careers and leadership potential. The findings were derived from case studies completed by the author during consultations with women faculty at

universities in the U.S. The case studies included participants in career development training programs for women in academe conducted at five large public universities, one small liberal arts college, and among three regional groups of women faculty sponsored by the National Science Foundation. Women faculty ($N = 149$) completed a survey assessing the institutional climate for women at their institution, participated in individual interviews concerning their career path, and completed a training program aimed at identifying "next steps" in their careers, as well as long-term goals. Significant issues confronting women professors included: lack of knowledge of the informal criteria for tenure and promotion; assignment of dissimilar teaching and service loads to men and women peers; salary inequities; and lack of availability of childcare. Individual solutions that were preferred focused on enhancing professional visibility, building negotiation skills, and maintaining priorities. Key themes contributing to a continuing "chilly" institutional climate for women included: gender inequities in startup funds and salary; inequitable or arbitrary treatment across departments and/or schools by Chairs and Deans; and "unintended slights" or "microinequities". Factors that served to "warm" the climate included having senior women in leadership positions; the standardization of peer review procedures; and the institution's commitment of resources to improving conditions for women, such as through NSF ADVANCE grants, endowed professorships, or gender equity training for administration. Many colleges and universities have made efforts to improve the institutional climate for women in academe, but the success of such programs is mixed. The results of the present study suggest specific ways to enhance the climate at both the individual and institutional level.

Keywords: *leadership, career development, training, gender*

Working mothers in Israel

SCHEIN, A. (Netanya Academic College),
MUHLBAUER, V. (Netanya Academic College)

The purpose of this paper is to examine the integration of Israeli women into the labor

market in view of the conventional gender arrangements that are maintained in the rhetoric and practice of "the working mother." The common expectation is that working mothers will develop strategies that enable them to function satisfactorily both in the family and in the labor market at the same time. The paper is a conceptual literature review with theoretical implications. It is based on data collected by the author and others over the course of a decade. It was found that the proportionate number of Israeli women joining the labor market has significantly increased since the 1970s, so much so that the dual-earner family is now considered the norm. This positive change towards greater gender and occupational equality is complicated, however, by the persistence of certain cultural and political structures that perpetuate the historical connections between gender and position within the family. In various social and political presentations of men and women, power gender hierarchies continue to hold sway. On the basis of the present study, it can be concluded that the contours of the shift of working mothers towards the labor market are shaped by gendered structures and ideologies that tend to maintain their hold on major role identities. The author will provide suggestions for women who must navigate their lives within these gendered structures amid ideological messages that might erect barriers that frustrate women's desire to combine work and family.

Keywords: *Israel, women, family, gender, occupational equality*

Perfectionism, self-silencing, and the experience of premenstrual syndrome

CHRISLER, J. (Connecticut College)

The purpose of the current study was to examine perfectionism and self-silencing in a community sample of adult women, who were recruited via internet discussion boards and Craigslist to participate in a study of "personality, attitudes, and women's health." Among the research questions were whether perfectionism and self-silencing scores would be correlated and whether either perfectionism or self-silencing scores would predict 1) women's tendency to use dualistic

discourse, or 2) women's belief that their premenstrual symptoms in general or their emotions in particular are difficult to control. A total of 182 women from North America participated in this study. A link to the online survey was advertised on message boards and on Craigslist in 18 cities. The mean age of participants was 29.6 years ($SD = 7.8$; range = 18-46 years). The majority were White (71%), heterosexual (89%), menstruating regularly (71%), not using oral contraceptives (65%), and had "moderate" to "strong" premenstrual symptoms (54%). Although most women indicated that they have experienced PMS (89%), only 10% have been diagnosed. Participants completed the Frost Multidimensional Perfectionism Scale, Affective Control Scale, Silencing the Self Scale, Health Locus of Control Scale, and a Dualistic Discourse Scale that was designed for this study. It was found that dualistic discourse (me vs. my "PMS self"), affect control, tendency to self-silence, and perfectionism were all positively correlated. There were differences between women who said that they have PMS ($n = 90$) and women who said they do not ($n = 78$). Women with PMS scored significantly higher on the Affective Control Scale and the Dualistic Discourse Scale. Those who believe they have PMS were more concerned about losing control of their emotions. In effect, they may explain or justify their loss of control by using dualistic discourse about their "true selves" versus their "premenstrual selves." Neither perfectionism nor self-silencing predicted dualistic discourse, $p > .05$. However, self-silencing ($p = .001$) and perfectionism ($p = .045$) both predicted affective control ($R^2 = .483$, $p < .001$). It was concluded that interventions based on reducing perfectionistic and self-silencing tendencies may prove to be useful to women with moderate to strong premenstrual symptoms.

Keywords: *women's health, self-silencing, premenstrual symptoms, perfectionism, dualistic discourse*

Religion and values during women's midlife development

HOWELL, L. (Queens College)

The overall study endeavored to understand and describe women's mid-life development so that therapists and mid-life women could facilitate their process. Focus groups of women from varying income, educational, racial, religious, ethnic, sexual orientation, and marital status backgrounds were conducted in the United States, in the rural Midwest and in New York City. Grounded theory analysis was performed on data collected by recording and transcribing the group sessions. Five groups of women were each interviewed either three or four times until redundancy was achieved in their conversations. Religion and values emerged as one of the themes of the women's discussions, both in rural and urban focus groups. As life circumstances dramatically changed (usually between ages 45 and 50), women responded to associated fear, anxiety, sadness and confusion by reexamining their lives. Many returned to religions that they had left. Some discovered twelve-step groups, and many searched for and found meditation, spiritual paths, and religions new to them. Some said that they wished they could find comfort in religion but they had not found such a spiritual home. The focus groups were led in a non-intrusive way. However, two constraints were agreed upon prior to group discussion: 1) no advice was to be exchanged, and 2) conversation was to be confined to each participant's personal experience—no stories about friends or family unless they impacted the participant in some way. Likewise, the facilitators refrained from evaluative comments about the content of participants' statements. The women responded in dramatic ways to the simple process of sharing their experiences and hearing those of others. However, they expressed difficulty finding credible and reliable information about what they were experiencing. Information abounds, but much of it does not measure up to scientific standards. Many opportunities will be discussed for therapists, writers, and middle-aged women. Among them are: how to address predictable variations in mid-life development, implications of race, sexual orientation, and socio-economic status, opportunities for therapists to provide useful information on mid-life, ethical implications of discussing religion with clients, and "spiritual emergency" as a motivator.

Keywords: women, mid-life development, religion, values, grounded theory analysis

Neuropeptides, social behaviour, and potential for clinical treatments: Translational neuroscience in the psychology clinic

Chair(s): GUASTELLA, A. (Brain & Mind Research Institute, University of Sydney)

Recent development in the field of neuroscience have placed the neuropeptides oxytocin and vasopressin as having a critical role in the development and regulation of social behaviour and associated psychopathology. This research has culminated in the development of neuropeptide models of psychopathology that have the potential to advance clinical treatments for disorders associated with interpersonal dysfunction. This particular symposium brings some of the leading researchers in this research field and aims to describe the role of neuropeptides in social cognition and function, as well the role more specifically of oxytocin in reward and addiction. Speaker 1 will present a range of experiments to demonstrate how oxytocin nasal spray influences social cognition and present a cognitive model to the study of neuropeptides. This model will be used to elucidate potential applications of oxytocin to treat clinical disorders. Speaker 2 will discuss the role of oxytocin in reward and discuss how oxytocin and dopaminergic reward systems may regulate social function and addictive behaviours. Speaker 3 will then focus on vasopressin and present some of the first studies evaluating arginine vasopressin influence on social cognition. Finally, Speaker 4 will summarise the symposium findings and present a new neuroscience-based conceptualization of the role of neuropeptides on social cognition and behaviour in humans.

Oxytocin to enhance social cognition in humans: Results from experimental cognitive designs

GUASTELLA, A. (Brain & Mind Research Institute, University of Sydney)

Oxytocin is known to have an important role in social behaviour in humans; however its underlying mechanisms are poorly understood. This talk summarises a series of experiments conducted by the author to tease apart the influence of oxytocin nasal spray on social cognition and information processing strategies in humans. Participants were administered oxytocin nasal spray and then given a social cognition and information processing challenge tasks. Results over a series of experiments show that oxytocin promotes the processing of positive social cues over those that are threatening or non-social. Results of these studies provide clear cognitive mechanisms for how oxytocin could facilitate approach related behaviours in humans. Implications for clinical treatments will be discussed.

Keywords: *oxytocin, social behaviour, nasal spray, cognition, information processing*

Oxytocin as a novel treatment for drug dependence: From the bench, to the street, to the clinic

CARSON, D. (Brain & Mind Research Institute, University of Sydney)

Increasing evidence suggests the neuropeptide oxytocin may be utilised as a treatment for a wide variety of psychopathologies, including addiction. Using a translational approach we aimed to determine the efficacy of oxytocin as a novel treatment for addiction. In a first study we trained rats to lever press to intravenously self-administer methamphetamine. Once responding had stabilised, one group of rats received escalating doses of oxytocin prior to daily self-administration tests while other rats received vehicle. After these tests, lever pressing was extinguished and the ability of methamphetamine primes to reinstate responding was studied with and without co-administration of oxytocin. In a separate study, using Fos immunohistochemistry we determined the ability of oxytocin to compete with a methamphetamine challenge and assessed the behavioural effects of this interaction through assessment of locomotor

hyperactivity. To provide insight into alterations in neuropeptide systems during drug intoxication in humans we collected blood from a group of methamphetamine intoxicated adults and compared their plasma levels of oxytocin, vasopressin, and cortisol to a drug naive healthy control group. We are now conducting a randomised clinical trial of chronic intranasal oxytocin in cannabis dependent patients and assessing a multitude of cognitive and behavioural effects resulting from this treatment. We showed that oxytocin dose-dependently reduced responding for intravenous methamphetamine in rats and significantly reduced relapse to drug-seeking. Secondly, our results showed that oxytocin effectively suppressed methamphetamine induced neural activity in key addiction related brain areas as well as reduced methamphetamine induced hyperactivity to a level similar to that of control animals. Our data also provide further insight into alterations in the neuropeptide systems in drug addicted humans, specifically methamphetamine users. I will finish by discussing some preliminary findings from the randomised controlled trial of intranasal oxytocin for cannabis dependence. We provide important insight into the role of oxytocin in drug addiction and argue its use as a novel therapeutic agent for drug dependence.

Keywords: neuropeptides, relapse, drug dependence, methamphetamine, oxytocin

Intranasal arginine vasopressin enhances social cognition in humans

ALVARES, G. (Brain & Mind Research Institute, University of Sydney)

Arginine vasopressin is a crucial hormone in the regulation of social behaviour. Like oxytocin, it is well known for its role in promoting social approach behaviours but it also has a more complex role in the regulation of social and territorial aggression, across numerous mammalian species. While the hormone has been implicated in the etiology of numerous clinical disorders associated with interpersonal dysfunction (e.g., Depression, Borderline and Anti-Social Personality Disorder), there is little understanding of its influence on human social cognition. In a series

of experiments, students were administered with arginine vasopressin nasal spray or a placebo before completing social cognition challenge tasks. Results of these studies provide the first evaluation in humans of arginine vasopressin nasal spray influence on social cognition. Arginine vasopressin has a very different influence on human social cognition to what has been found with oxytocin. Results will be presented at the time of presentation. Arginine vasopressin had a more complicated but facilitatory influence on human social cognition in humans. These results are discussed in direct relation to the broader neuropeptide research field and the neurobiology of social function, as well as what these results mean for the role of vasopressin in the etiology of clinical disorders and interpersonal problems.

Keywords: Arginine vasopressin, hormone, social behaviour, interpersonal factors, aggression

The psychology of Oxytocin: Prosocial Behaviour, social salience or approach-related emotion

KEMP, A. (School of Psychology, University of Sydney)

There is strong research interest in the role of the neuropeptide oxytocin in human affect and debate over whether oxytocin is involved in purely positive pro-social behaviours or a more general involvement in the salience of social behaviours. Research findings from our own laboratory and the broader literature will be reviewed and an alternative proposal presented. It will be argued that oxytocin may serve to increase approach-related behaviours while inhibiting withdrawal-related behaviours. This proposal is supported by the psychology and neuroscience of approach- and withdrawal-related behaviours that highlight a distinction between positive and approach-related emotions as well as preliminary neuroimaging studies suggesting that oxytocin may reduce uncertainty about the predictive value of social stimuli, which may then facilitate approach behaviours. In summary, the psychology and neuroscience of approach and withdrawal behaviour in humans will be reviewed and a theoretical framework presented, from which recent human research

on the role of OT in social behaviour may be better understood.

Keywords: *neuropeptide, oxytocin, emotions, social behaviour, neuroscience*

New approaches to the assessments of achievements by students with additional needs (SWANS): A four year study of development

Chair(s): CARE, E. (University of Melbourne)

This set of papers outlines research undertaken to develop and validate procedures for monitoring learning progress for students with additional learning needs. The research is grounded on international and national shifts towards standards- and criterion-referenced assessment of student outcomes. It extends that work to assist teachers to assess and report development for students with diverse intellectual and learning disabilities and to foster the use and dissemination of teaching strategies and resources that are specifically linked to learning standards and pathways. The primary aims of the project were: (1) To develop and validate assessment materials that describe expected progress in the foundational skills of communication, literacy, intrapersonal learning and interpersonal processes for students with additional learning needs, and that are appropriate for all students regardless of the nature of their learning needs; (2) To investigate relationships between sub-types of additional learning needs and learning pathways; (3) To assist teachers in both mainstream and special schools to use the assessment materials to inform their decisions about effective and targeted teaching strategies for students with additional learning needs, and to monitor and report their students' progress. The papers provide descriptions of finalised measures, and identify differences across diverse groups of students with additional needs.

A framework for assessing students with additional needs (SWANS)

GRIFFIN, P. (University of Melbourne)

This project addressed an area of educational assessment that has been for many years neglected as 'too hard'. If developmental progress can be mapped and identified in competency terms and linked to successful teaching and learning strategies, students can be expected to make more rapid progress towards achieving their potential. Teachers in mainstream schools can also expect to be helped in recognising development and given advice for intervention. The project undertook to design measures which sampled relevant domains of development for children with special needs. Profiling developmental standards of learning for students with intellectual disabilities was proposed as a way of helping teachers to monitor and intervene accurately and appropriately for individual students. A competency-based assessment approach was applied in the project to assessment of these students. After identification of major domains of functioning, through literature review and fieldwork, items were developed to sample the developmental domains, and data collected through teacher responses concerning specific students. These data were analysed through an item response modelling approach, and the measures finalised for professional use. Over the three years of the project, data from the teachers of 1700 students were analysed and used to generate student profiles which are linked to intervention strategies for teacher use. The method represents a new approach to judgement-based performance measurement and offers a way of maximising reliability and nomological approaches to validity. The method also provided the state government with a basis upon which to build a new funding model for schools dealing with students with additional needs (SWANS). The implications of the study are likely to be manifested in new government policy on funding for these students.

Keywords: assessment, development, intellectual disability, performance, validity

Assessment of communication and literacy skills in students with additional needs (SWANS)

WOODS, K. (University of Melbourne)

This study addressed a need for the assessment of students with intellectual disabilities in the areas of communication and literacy. The study used item response modelling to develop an observation protocol for teachers. This enabled students to be placed on a level within a hierarchy of development. The purpose of the developmental hierarchy was to assist teachers to identify the Vygotsky's zone of proximal development and then to advise them of possible resource and teaching strategy. Items sampling the domains of communication and literacy skills were developed based on input from expert panels. In 2008 these were responded to by more than 700 teachers and 1700 students from 21 mainstream and 56 specialist schools in Victoria, concerning their students aged from 3 years to 18 years. The items were responded to on hard copy OMR scannable survey forms and later converted to an online system of data capture. The 2008 results were subjected to item response modelling and scale analyses. From these data, two subscales (Communication and Literacy) were identified, with alpha coefficients ranging from 0.96 to 0.98. The instruments were then used to construct developmental learning progressions for each of the domains. Teachers were assisted in interpreting the data and how to intervene strategically to enhance the student development. Pre test and post test assessment shows growth of the students beyond the expected levels within the specific interventions. In particular this study examined the communication and literacy competencies of students with intellectual disability, mapped the developmental progression, and provided teachers with a series of assessment protocols and resource advice. It demonstrated that mainstream teachers (and special education teachers) could benefit from the advice linked to developmental learning progressions and when targeted intervention was used, children with learning disabilities could make steady progress.

Keywords: assessment, intellectual disability, communication, literacy, teaching

Assessment of interpersonal processes in students with additional needs (SWANS) COLES-JANESS, B. (University of Melbourne)

The aim of this study was to explore whether interpersonal processes can be annexed to a meaningful progression other than an age-based normative framework. If so, constructed profiles may offer teachers a conceptual map which can be used to guide their instructional decisions. The challenge of the study was to construct a measure that was based in theory, and that framed skills in terms of overarching social goals or tasks that were applicable across multiple settings. A series of workshops with specialists, researchers and teachers identified critical indicators of development which were collated into an observation instrument. Teachers completed the observation survey to measure the social-emotional competencies of their students. Additional needs were distributed across the functioning domains of communication, language and literacy; mobility; cognitive capacity; social and emotional development. Students were also identified with co-occurring additional needs such as autism spectrum disorder, behavioural problems, cerebral palsy, Down syndrome, vision impairment, ADHD. Data for 1700 students were returned in 2007 for the development phase of the project, and data for 600 students were returned in 2008 for the calibration phase. Results are reported across the areas of social interaction, social responsibility, and transcending social difficulties. The emphasis in this report is on the extent to which the constructed ability continuum can represent student interpersonal processes across diverse groups of students. Exploration of differential item functions indicates that the items were stable across diverse groups. The study found that a developmental progression of interpersonal development can be established as a unidimensional construct applicable to students with a wide age range and intellectual disabilities. Pre and post tests also indicated that with adequate guidance, students were able to make better than expected progress across levels on the developmental progression.

Keywords: interpersonal processes, conceptual map, teachers, students, additional needs

Assessment of intra-personal skills in students with additional needs (SWANS)

ROBERTS, E. (University of Melbourne)

The aim of the research described in this paper was to build a protocol for describing students' development of emotional knowledge and understanding, and to tailor this to the requirements of assessing the progress of students with additional needs. The paper reports the establishment of a developmental profile, using item response modelling procedures for defining standards-referenced frameworks (Griffin, 2007). This resulted in the development of an observation questionnaire of students' emotional skills. The approach relied on the knowledge and collaboration of experienced teachers and researchers in the fields of special education and emotional development to establish a hypothesised framework of critical skills, observable behaviour statements, and developmental criteria that map qualitative transitions in student performance. The framework was validated against observation data gathered by teachers in 2007, from 77 Victorian government schools (21 mainstream, 56 special education) on 1597 students (3 to 18 years) with additional needs. Their responses were calibrated using partial credit item response modelling to identify empirically major transitions in students' emotional development and to establish the construct validity of the profile. This resulted in developmental progressions with eight levels of development defined by tasks that students completed. A separate scale was developed based on a sample of more than 400 autistic children; pre and post test measures showed growth on most cases and these were validated using nomological approaches testing hypotheses for causes of variation in measures obtained from the instrument. The results supported the validation procedure. The study has demonstrated that it is possible to chart the developmental learning pathway in intra personal skill development of students with intellectual difficulty. In particular it demonstrated a different developmental pathway for autistic children in the cognitive domain. Intervention strategies and materials have been associated with different rates of development.

Keywords: intra-personal skills, additional needs, students, protocol, emotional knowledge

New approaches to the treatment of obsessive compulsive and related disorders: Self-related concepts in the understanding and treatment of psychopathology

Chair(s): MOULDING, R. (SwinPsyCHE Research Centre, Swinburne University of Technology)

Discussant(s): FROST, R. (Smith College)

Research has supported the efficacy of cognitive-behavioural therapy (CBT) in the treatment of Obsessive-compulsive problems. However, outcomes vary, dropout/relapse rates remain generally high, and for many, effective treatments remain inaccessible. This highlights the need for fresh approaches that target specific factors predictive of poorer outcomes, that seek to develop novel treatment strategies based on new theories, or that develop new modes of delivering existing evidence-based treatment. This symposium brings together four studies addressing some of these issues in the treatment of Obsessive-Compulsive Disorder (OCD) and Body Dysmorphic Disorder (BDD), both disorders that are characterized by high degrees of obsessive-compulsive behaviours. The first two papers focus on some of the factors related to severity of symptoms and that may possibly predict poorer treatment outcome. In particular, the first paper examines the relationship of depression and symptom severity and discusses possible implications in terms of treatment, while the second paper discusses the role of cognitive factors in predicting treatment outcome following a CBT group treatment. The third paper focuses on the use of new technologies in delivering effective evidence-based treatments for these disorders and discusses the development and evaluation of an internet-based therapist-assisted CBT treatment program for OCD. Finally, the fourth paper presents the development of new treatment for BDD concerns that is based on an Acceptance

and Commitment Therapy approach. The preliminary findings of an evaluation of a 12-week ACT based treatment for BDD are discussed.

Cognitive and behavioural predictors of depression in obsessive-compulsive disorder.

KEONG YAP, A. (RMIT University), MOGAN, C. (University of Melbourne), KYRIOS, M. (Swinburne University of Technology)

This study aimed to examine the characteristics of obsessive-compulsive disorder (OCD) patients with and without depression. Consistent with previous research, we expected to find a relationship between depression and (1) OCD severity, (2) anxiety, (3) obsessive-compulsive beliefs, (4) insight, (5) avoidance, and (6) severity of harm-related obsessions. Participants were 46 OCD patients with comorbid clinical depression, and 56 with OCD only. The results showed no significant differences between the two groups on all measures. However, analyses showed that the severity of depressive symptoms was positively correlated with anxiety, avoidance, harm-related obsessions and impulses, and obsessive-compulsive beliefs. These factors accounted for 50% of the total variance in predicting the severity of depressive symptoms, with anxiety and avoidance making significant unique contributions to the final model. Results suggested that interventions dealing with anxiety, obsessive-compulsive beliefs and avoidance might be important components for treatment of OCD with comorbid depression.

Keywords: *obsessive compulsive disorder, depression, anxiety, beliefs, avoidance*

Delivering CBT in groups when treating OCD: Effectiveness and predictors of treatment outcome

MOULDING, R. (Swinburne University of Technology), NEDELJKOVIC, M. (Swinburne University of Technology), KYRIOS, M. (Swinburne University of Technology)

There is considerable research evidence supporting the efficacy of individual cognitive-

behaviour therapy (CBT) in treating Obsessive-Compulsive Disorder (OCD). However, access to such treatment is limited. There is an increasing recognition of the need to improve access to effective treatments, while taking into account the economic costs of delivering such treatments. There is emerging evidence of the effectiveness of group CBT in treatment of OCD, although more research is needed to examine the factors related to treatment outcomes. This study examined the effectiveness of a 12-week manualised group CBT program in reducing symptom severity and leading to changes in a range of cognitive factors associated with the disorder. It also sought to examine possible predictors of treatment outcome. Results are discussed in terms of the potential costs and benefits of this approach to treatment.

Keywords: *cognitive behavioural therapy, obsessive compulsive disorder, treatment, symptom severity, costs*

Internet based CBT for OCD: Changing the mode of delivery of effective evidence-based treatments

NEDELJKOVIC, M. (Swinburne University of Technology), KYRIOS, M. (Swinburne University of Technology), MOULDING, R. (Swinburne University of Technology), KLEIN, B. (Swinburne University of Technology), AUSTIN, D. (Swinburne University of Technology)

Research has provided an extensive evidence base for Cognitive-Behaviour Therapy (CBT) as an effective treatment for Obsessive-Compulsive Disorder (OCD). However, this specialised treatment remains inaccessible for many Australian sufferers due to a shortage of appropriately qualified professionals (especially in rural and regional areas), individual financial constraints, and the social stigma associated with seeing a mental health specialist. Internet-based psychological treatments have shown promise in providing effective, accessible and affordable treatment for a range of anxiety disorders. OCD-STOP, an internet-based therapist-assisted CBT program for OCD, was developed in an effort to provide specialised, comprehensive, and low-cost treatment for OCD that is available to all Australians. This paper will present the initial

findings relating to the effectiveness of OCD-STOP and discuss potential benefits in terms of accessibility, availability and cost-effectiveness of this new mode of service delivery.

Keywords: *cognitive behavioural therapy, obsessive compulsive disorder, effective treatment, Australia, internet-based intervention*

A group acceptance and commitment therapy protocol for Body Dysmorphic Disorder

MANCUSOA, S. G. (Swinburne University of Technology), KYRIOS, M. (Swinburne University of Technology)

Body dysmorphic disorder (BDD) is a debilitating disorder characterised by an excessive preoccupation with an imagined or slight defect in physical appearance. Up to 71% of sufferers will seek dermatological or cosmetic surgery procedures, but these procedures are ineffective in treating BDD. Those sufferers who do seek psychological or psychiatric treatments represent particular challenges for the treating clinician, including impaired insight, difficulties with engagement, and poor treatment adherence. Acceptance and Commitment Therapy (ACT) may prove useful in reducing BDD symptom severity and improving treatment engagement and adherence. A 12-week group ACT treatment protocol for BDD and preliminary evaluation data will be presented.

Keywords: *body dysmorphic disorder, physical appearance, Acceptance and Commitment Therapy, symptom severity, psychological treatment*

New assessments of social and emotional abilities for applied settings

Chair(s): ROBERTS, R. (Center for New Constructs, Educational Testing Service)

Discussant(s): MATTHEWS, G. (University of Cincinnati)

There is growing concentration on the psychological assessment of noncognitive attributes; in education, the military, the workforce, and other applied settings. Particularly important has been a resurgence of interest in social and emotional abilities (and related competencies), qualities that early pioneers such as Dewey and Thorndike suggested were just as important as cognitive abilities to life success. Encumbered by measurement challenges, research into these constructs moved very slowly for nearly a century, but it appears there is currently something of a renaissance, motivated largely by new technologies, new conceptual developments, and advances in psychometric modeling. This symposium examines emerging paradigms that have been designed explicitly to assess social and emotional abilities. Each presentation focuses on a paradigm that has so far received scant attention in the research literature. Thus, paper 1 introduces symposium participants to an other-report form of the situational judgment test; the authors of paper 2 discuss their work using multimedia techniques to assess emotional abilities; paper 3 introduces the Theory of Planned Behavior (and related models) to measurement of job insecurity and emotional abilities; and paper 4 introduces new measurement paradigms for face cognition, an important component of social abilities. Each of the presentations shares a common concern with large data sets, psychometric modeling, the acquisition of validity evidence, and the relation that these social and emotional assessments has with valued outcomes. All four presentations thus end with speculation concerning the import of these findings in applied settings. The chair will provide an initial overview of these various

contexts for the symposium, with an international expert in the field serving as a discussant. Key learning objectives of the symposium include: (1) Developing an increased awareness of the variety of social and emotional abilities that may be relevant for applied settings; (2) Understanding innovative new procedures that may be applied to a variety of research and applied endeavors; (3) Understanding the importance of psychometric modeling in the validity process; (4) Developing an awareness of the applications (i.e., selection, development, succession planning, and policy) of social and emotional concepts in a variety of applied settings (i.e., education, work, gerontology).

A first look at an other-report situational judgment test of emotion management

MACCANN, C. (University of Sydney), ROBERTS, R. (Center for New Constructs, Educational Testing Service)

Situational Judgment Tests (SJTs) are frequently used for high stakes applied applications, in part due to concerns that alternative measures such as self-report personality assessments are susceptible to impression management. However, recent research indicates that SJTs may also be susceptible to impression management. One solution to this issue is to use other-report formats on SJT, where an observer reports the target's probable behavior in a series of situations. This study is the first attempt of which the authors are aware that examines the differences between self- and observer-reports on an SJT. We explore this issue in an educational setting, using an SJT designed to assess emotion management in adolescents. The SJT was administered to 382 eighth-grade students (51% male) with typical performance instructions (i.e., "what would you do in this situation?"). The SJT was also administered to a parent of each student in other-report format (i.e., "what would your child do?"). Students also completed measures of personality, life satisfaction, feelings towards school, vocabulary, and mathematics. All measures were administered in proctored, computerized testing sessions. Both students and parents reported the students' GPA in the

previous semester. Compared to self-reports, parent-reports showed: (a) lower means, (b) greater gender differences (in favor of girls), (c) higher correlations with Extraversion and lower correlations with Agreeableness, and (d) lower correlations with vocabulary. Self- and parent-reports were only weakly correlated ($r = .19$). With respect to valued educational outcomes (in the present context: academic achievement, positive feelings towards school, and life satisfaction), both self- and parent reports showed near equal prediction. Although parent- and self-reports were weakly correlated, relationships with other criteria exceed this value, indicating that non-shared variance may not be composed of error variance. Rather, self- and other-reports may index different aspects of emotional management: Other-reports are necessarily based only on observable behaviors, whereas self-reports may use internal sources of information (though these may include impression management biases). Results support the idea that other-report format of SJT can be used, although research examining this issue with adults under high-stakes conditions is now required.

Keywords: *other-report, situational judgment, emotion management*

Evidence supporting the use of multimedia assessments of emotional abilities in organizational settings

SCHULZE, R. (University of Wuppertal),
MACCANN, C. (University of Sydney)

It appears that that there are limitations in extant assessments of emotional abilities (EA), with the need for alternative measurement approaches. Thus, two multimedia tests of EA were developed: (1) A situational judgment test (where participants rate a scenario for emotional relevance and salience) and (2) a principal-agent paradigm (where event-emotion contingencies in others have to be perceived and memorized and emotion-behavior contingencies inferred from observed behavior to predict future behavior). Two studies were conducted to determine whether: (a) the measures had adequate psychometric properties, (b) EA test scores were valid, and (c) the multimedia assessments had

meaningful relations with educational and life outcomes. The studies involved 857 community college and university students. Study 1 examined the new tests' relationships with emotions measures (e.g., the Mayer-Salovey-Caruso Emotional Intelligence Test), Big Five personality factors, five cognitive ability factors (e.g., fluid, crystallized ability), and outcome measures (e.g., GPA, coping with stress). Study 2 examined the test-retest reliability of the new measures, along with relationships with affect measured by the Day Reconstruction Method (DRM). In Study 1, both new measures were found to have (a) acceptable internal consistency reliabilities, (b) moderate to high relationships with emotion measures, (c) moderate to high correlations with cognitive ability measures, and (d) weak correlations with personality factors. Regression analyses suggested that the multimedia assessments consistently added to the prediction of GPA, over and above personality and intelligence. In Study 2, test-retest reliabilities were found to be satisfactory. The relationship that both the measures shared with the DRM were also highly suggestive: Correlations exceeded $r = .40$ for reported net positive affect while socializing and working. The multimedia assessments appear to have face validity and to have acceptable measurement properties. Relationships with personality, intelligence, other emotions measures, and valued outcomes indicate that the scores have demonstrable construct validity. The DRM results are highly suggestive for the practitioner; this approach is used in economic models and indicates that EAs may play a role in worker satisfaction and productivity, for example. We conclude with discussion of plans to conduct experimental and training studies.

Keywords: *multimedia assessment, emotional abilities, organizational settings*

Job insecurity, emotional intelligence, workplace emotional reactions, and decision-making behaviors

JORDAN, P. (Griffith University), ASHKANASY, N. (The University of Queensland), LAWRENCE, S. (Griffith University)

During turbulent economic times, negative behaviors that emerge from perceptions of job insecurity can be a major issue. Although research has linked perceptions of job insecurity to stress, employees that feel insecure in their jobs may get caught in a pattern of negative behaviors. The aim of this research was to develop and test a model of the behavioral consequences of job insecurity and to examine the potential ameliorating effects of emotional intelligence. The theoretical framework for our research draws on Fishbein and Ajzen's (1975) Theory of Reasoned Action, Ajzen's (1991) Theory of Planned Behavior, and Threat Rigidity Theory (Staw, Sandelands & Dutton, 1981). Based on these models, we describe and justify twelve empirically testable hypotheses. The data for this research were collected in two field studies. In Study 1, we collected data using an internet survey completed by 217 participants. The data for Study 1 were collected over a 3 month period. In Study 2, we administered two paper-and-pencil surveys where we collected independent and dependant variables one month apart. Study 3 involved 579 employees of a large private organization in Australia. The data from both studies were analyzed using Structural Equation Models. These models reveal that job insecurity is associated with lower affective commitment and high work-related stress and this in turn leads to employees' enacting poor decision-making behaviors (e.g., procrastination, blaming, hypervigilance, withdrawal). Based on our findings we note that emotional intelligence, and in particular, awareness and management of emotions, improved decision-making outcomes. Specifically, the findings from this research confirm that the negative effects of job insecurity on employee decision-making behaviors are ameliorated by respondents' awareness and management of their own emotions. We conclude with a discussion of the theoretical and practical implications of our findings, and provide suggestions for future research.

Keywords: *job insecurity, emotional intelligence, workplace*

WILHELM, O. (Humboldt University),
HILDEBRANDT, A. (Humboldt University),
SOMMER, W. (Humboldt University)

Face perception and face cognition are important social abilities. Available measures of these abilities are wanting. We developed a computerized battery with 15 indicators and refined and validated this battery in a series of studies. In studies 1 and 2 a measurement model with latent factors for face perception, face memory, and facial speed was established and replicated. Additionally, face cognition factors could be regressed only partly onto established ability factors. In study 3 we investigated age invariance of face cognition and found that primarily factor means change with age. The relative independence of established abilities was replicated. In study 4 we trained several experimental groups on specific factors of face cognition and found substantial improvements in mean performance. Taken together the results provide strong support for the ideas that: (a) there are several face cognition factors, (b) these factors are distinct from established ability factors: (c) that these factors show strong age decrements in means, and (d) that interventions can yield substantial improvements in mean performance. We will discuss interventions for an aging work force and suggest application of the measures for selection into jobs in which face cognition is crucial (e.g., airport security personnel). We will highlight current developments of our battery in the area of emotion recognition and emotion expression.

Keywords: *face cognition, perceptions, measurement*

Face cognition: Measures and applications

New directions for work and organizational psychology

Chair(s): SINANGIL, H. K. (Marmara University)

Discussant(s): HAKEL, M. D. (Bowling Green State University)

Work and organizational psychology science and practice has been continuing to support and enhance the wellbeing of individuals, organizations and countries across continents since 1904. This symposium highlights some new developments and ongoing research. The topics to be presented and discussed in this symposium are on, the positive effects of self talk on self efficacy and employment; fit between employment flexibility characteristics and preference of youngsters; preferred leadership styles as actual and ideal leader behavior in organizations; future goals on work and organizational psychology and demands of civil society. The topics to be presented as contributions are various, however interrelated with the needs of individuals (professionals) and organizations across the globe.

The positive effects of self talk on self efficacy and employment

LATHAM, G. (Rotman Faculty of Management University of Toronto)

Social cognitive theory has practical utility for a severe problem in Europe and North America, namely, unemployment. Verbal self guidance, that is, changing dysfunctional to functional self talk, can be used to increase self-efficacy for both seeking and obtaining employment. Empirical research conducted by the author and his colleagues will be explained. The studies involve displaced managers, native North Americans, and women in Turkey over the age of 40.

Keywords: *Social cognitive theory, unemployment, self guidance, self-efficacy*

Fit between employment flexibility characteristics and the preferences of youngsters: influence on job attitudes and well being during a period of economical crisis.

PEIRÓ, J. M. (University of Valencia), ROCABERT, E. (University of Valencia)

During the last two years, clear signs of economical recession and financial crisis have appeared in most developed economies. In fact unemployment rates have grown and the quality of the jobs offered has been significantly reduced. In Spain the unemployment rate at the end of 2009 is near 20% and a large part of the jobs available in the labour market offer a temporary contract and arrangements that require flexibility in different features such as geographical mobility, or flexible time schedules. In a study conducted with a representative sample of the Spanish youth population (16-30 years) a number of flexibility job features has been considered (contractual, time scheduling, geographical; part time jobs; functional; qualification,) and the preferences of the youngster interviewed were also explored. On the basis of this information we have analyzed the fit or misfit between the characteristics of the job hold and the preferences of the youngsters about them. The misfit is a significant predictor of several indicators of well-being and work attitudes. The moderating effects of the perception of the labour market by the youngsters has also been analyzed.

Keywords: *economical recession, financial crisis, unemployment, Spanish, young people*

Preferred leadership styles and authoritarianism in organizations

SINANGIL, H. K. (Marmara University), YURTKORU, S. (Marmara University), DURMUS, B. (Marmara University), LITTRELL, R. (Auckland University of Technology)

The change in the ideal and actual leader behaviors during Time I and Time II studies are compared using LBDQ XII dimensions. Independent sample t-tests are used to make the analyses. The results revealed that except 'role assumption' all eleven dimensions have

shown significant changes in the actual leader behaviors. System oriented leadership dimensions of LBDQ XII: 'initiation of structure', 'persuasion', 'superior orientation', and 'representation' has decreased in the last 5 years ($M_{time1}=3.25$, $M_{time2}=3.10$, $p = 0.00$; $M_{time1}=3.72$, $M_{time2}=3.44$, $p = 0.00$; $M_{time1}=3.25$, $M_{time2}=3.95$, $p = 0.00$; $M_{time1}=3.42$, $M_{time2}=3.71$, $p = 0.00$ respectively). However 'production emphasis' has increased as actual leader behavior ($M_{time1}=3.15$, $M_{time2}=3.33$, $p = 0.00$). Whereas person oriented leadership dimensions of LBDQ XII: 'consideration', 'tolerance of freedom', 'tolerance of uncertainty', 'predictive accuracy', 'integration' has increased in the last 5 years ($M_{time1}=2.86$, $M_{time2}=3.30$, $p = 0.00$; $M_{time1}=2.98$, $M_{time2}=3.48$, $p=0.00$; $M_{time1}=2.61$, $M_{time2}=2.94$, $p=0.00$; $M_{time1}=3.17$, $M_{time2}=3.69$, $p = 0.00$ and $M_{time1}=3.11$, $M_{time2}=3.75$, $p = 0.00$ respectively). Only 'demand reconciliation' has shown a decrease ($M_{time1}=3.18$, $M_{time2}=3.08$, $p = 0.00$). Results indicate Turkish leaders are exhibiting person oriented behaviors more and system oriented behaviors less than five years before. When the ideal leader behaviors are compared 'role assumption' and 'tolerance of uncertainty' were not significant and all others were significant. In line with the actual leader behaviors it is found out that system oriented leadership dimensions decreased except production emphasis ($M_{time1}=3.71$, $M_{time2}=3.46$, $p = 0.00$; $M_{time1}=3.89$, $M_{time2}=3.74$, $p = 0.00$; $M_{time1}=3.79$, $M_{time2}=3.59$, $p = 0.00$; $M_{time1}=3.89$, $M_{time2}=3.74$, $p= 0.00$ and $M_{time1}=3.34$, $M_{time2}=3.57$, $p = 0.00$ respectively). Interestingly person oriented leadership dimensions of LBDQ XII, 'consideration', 'predictive accuracy', 'integration' and 'demand reconciliation' have decreased as ideal leader behaviors ($M_{time1}=3.66$, $M_{time2}=3.35$, $p = 0.00$; $M_{time1}=4.04$, $M_{time2}=3.61$, $p = 0.00$; $M_{time1}=4.12$, $M_{time2}=3.73$, $p = 0.00$ and $M_{time1}=4.03$, $M_{time2}=2.56$, $p=0.00$ respectively). Only 'tolerance of freedom' has increased over the 5 years ($M_{time1}=3.66$, $M_{time2}=3.80$, $p = 0.00$).

Keywords: leader behaviors, person oriented leadership, Turkish

Future goals on work and organizational psychology and demands of civil society

AVALLONE, F. (University of Rome "la Sapienza")

In the first century of its existence, Work and Organizational Psychology has performed basic research, applied research, research and products development, intervention models in regards to organizational change. For the future, Work and Organizational psychology's mission will move along the dimension of continuity. Instead, we can think about new perspectives if we argue in terms of goals rather than in mission. Work and Organizational Psychology future goals can move along the dimension of discontinuity. These new targets may be based on some changes occurred during last decades and can be summarized as follows: a) from individual to context: a lower centering on individual and more attention to relationship that each of investigated subjects – individual, groups and organizations – relates with each context; b) from monolevel framework to multidimensional analysis: research and adoption of integrated models that can account for diversity and interdependence of studied variables; c) from individual customer to social customer. The areas and topics of research have in the past suffered too much for organizational needs. Most of research has been produced on behalf and in favor of organizations and of companies in particular. There is a new call from civil society demands both in local and in global contexts. In this perspective, some cultural issues seem particularly evident and may become future goals of work and organizational psychology: 1) need to become not only more efficient but more effective, as individuals, as organizations, as systems; 2) comparison between religions, races, cultures and values and management processes of integration and differentiation able to establish new sites of global civilness; 3) definition of social responsibility of organizations, the ways by which work contexts can be environments of civilization (eg, environment, justice, education, health and well-being of workers and society as a whole; 4) demand for transparency and ethical tension in business and organizational practices (eg. research on practices of

exploitation, moral disengagement on individuals, groups and organizations).

Keywords: *organisational psychology, organisational change, organisational needs, cultural issues*

Occupational health psychology research with high risk occupations

Chair(s): BROUGH, P. (Griffith University)

This symposium brings together recognised experts in psychological health and well-being and its application to workers within the high-risk industries. The four (Australian) presenters represent two separate international research collaborations; the symposium co-authors from New Zealand, Germany and the UK will also attend and participate in the resulting discussions. The symposium addresses the critical factors in liaison, sampling, data collection and reporting for this type of research and we present findings from our current applied research with policing, corrections and fire-fighter samples. Importantly the symposium focuses on the fact that applied experimental research can be conducted within these high-risk industries. The key learning outcomes of this symposium are: (1) To increase awareness of the critical factors that influence research success with the high-risk occupations; (2) To provide research examples demonstrating innovative designs and successful outcomes for the health and well-being of high-risk workers; (3) To encourage the instigation of evidence-based interventions that impact positively on employees' health and performance.

'Causes of the causes': Psychosocial safety climate, worker psychological health and engagement

DOLLARD, M. (University of South Australia)

We address a gap in work psychology research and practice regarding the 'causes of the causes' of work stress; that is the origins of adverse psychosocial working conditions. Psychosocial safety climate (PSC) of organizations refers to policies, practices, and procedures for the protection of worker psychological health and safety that are largely driven by senior management. By extending

the Job Demands-Resources (JD-R) framework we explain how PSC affects psychosocial working conditions and in turn psychological health problems and engagement, via mediation and moderation paths. A longitudinal study of police constables ($N = 141$), in 23 police stations, with two measures (lag of 14 months). Hierarchical linear modelling (HLM) was used; PSC was aggregated to the station level; demands, resources, health and engagement were assessed at the individual level. Levels of PSC were found to be significantly lower than in a representative Australian worker sample. PSC predicted change in psychological health problems partially via job demands and job resources. PSC predicted change in employee engagement via job resources. PSC moderated the expected Demands X Resource interaction. Several results were validated alternating the Level Two PSC station data with an independent sample of police constables ($N = 186$). Results supported the dual functionality of PSC in predicting both health and production (1) via prevailing working conditions triggered by PSC itself, and (2) via PSC enabling the utilization of resources to offset the negative effects of demands. This latter result is particularly important for first responder occupations like policing where some emotional demands may not be preventable. The PSC construct has practical utility helping police and other organizations meet their duty of care, legal and moral obligations. As a likely 'cause of the cause' the most effective target to prevent and control stress arising from psychosocial factors is PSC; building a psychologically healthy productive workplace. Research and practical attention needs to be given to the psychosocial safety climate construct as it has been in physical safety climate movement. Results show that PSC exists and is experienced collectively; the construct traverses new theoretical space. Including organizational PSC in job stress models also represents an important extension.

Keywords: *job demands, climate, stress, police*

Group 'Critical Incident Stress Debriefing' following work-related potentially traumatic events: A 'gold standard' randomised controlled trial

TUCKEY, M. (University of South Australia)

High-risk occupations have foreseeable risk of exposure to potentially traumatic events (PTEs). Although single-session individual debriefing is contraindicated, the efficacy of group psychological debriefing for protecting high-risk workers from psychological harm remains unresolved. Despite over 20 years of research, methodological flaws have prevented reliable and valid conclusions. To overcome limitations in the evidence base and move research outcomes forward, we conducted the first 'gold standard' trial of Critical Incident Stress Debriefing (CISD) following exposure to work-related PTEs. A randomised controlled trial compared the efficacy of CISD (the most widely used form of group psychological debriefing) with that of psychoeducation and a (screening only) control condition. Participants were 67 volunteer fire-fighters (91% male) who attended one of 20 PTEs. Random allocation took place on an event (not individual) basis. Pre- and one-month post-intervention measures of psychological distress (K-10), post-traumatic stress (IES-R), and alcohol consumption were collected. Data were analysed using multilevel modelling in MLWIN to account for the nested structure (individuals nested within events). Controlling for pre-intervention scores, only CISD led to a significant reduction in alcohol use at the post-intervention test. Significant changes in psychological distress and post-traumatic stress were not seen. This study provides the first 'gold standard' evidence that CISD can protect workers in high-risk occupations from the impact of PTEs. First, CISD 'did no harm', a legitimate concern for any intervention and particularly given findings and debate regarding individual debriefing. Second, although the benefits of CISD were limited to alcohol consumption, alcohol use may be the best indicator of a positive effect in our predominantly male sample: men tend to under-report psychological health symptoms, and low levels of pre-intervention symptomatology across the sample left little room for improvement. Unlike single-session individual debriefing, group psychological debriefing should not be abandoned, but more high quality research is needed to establish when and for whom it works best. Despite difficulties achieving adequate levels of

internal control, conducting rigorous intervention research with high-risk occupations is not impossible. In fact, such research is vital to improve psychosocial support for these courageous workers.

Keywords: high-risk occupations, potentially traumatic events, critical incident stress, post-traumatic stress, alcohol use

Are police officers really more stressed? Assessing the impact of police work by job role

BARBOUR, J. (Griffith University)

The impact of emergency service work on civilian workers has received some attention in the literature, although the majority of published intervention studies have been applied only to operational staff members (e.g., police officers). The research does however suggest more similarities than differences in key occupational health psychology outcomes when comparing police officers and civilian staff members. Using the job demands-control-support (JDCS) model as a theoretical framework, this study compared the impact of job characteristics for operational police officers and civilian police workers. Two self-report surveys were distributed (18 months lag) to employees from one Australian police service. The matched responses of 2,646 police officers and 1,170 civilian staff were compared in a series of MANOVAs. The moderating influence of job status (police officer versus civilian worker) in the prediction of psychological strain, well-being, turnover intentions and job performance was examined via multiple regression analyses. Police officers and civilian workers were found to differ significantly in their perceptions of organisational climate, job satisfaction, work engagement, coping, well-being and job performance. Police officers reported significantly higher levels of job demands and emotional dissonance, but significantly lower job control and supervisor support, than civilians. However, differences between police officers and civilians in neuroticism, colleague support and turnover intentions were not significant, and differences in psychological strain were marginal. Controlling for demographic differences

between police officers and civilians, the effects of job control and supervisor support on psychological strain and well-being were found to be moderated by job status. However, job status did not moderate the effects of strain and well-being on turnover intentions or job performance. A significant three-way interaction between job demands, job control and job status was found when emotional dissonance was employed as the job demands measure. Police officers and civilian workers demonstrated substantive differences in their self-reported job characteristics and well-being, which were particularly evident in stressor-strain associations. However, job status did not influence associations between strains and organisational outcomes. Theoretical and practical implications for research with police populations are explored, including choice of theoretical framework, intervention design and evaluation, and organisational reporting.

Keywords: emergency workers, occupational health, job demands-control-support model, psychological strain, police

Occupation stress interventions in the high-risk industries: Achievable and successful

BROUGH, P. (Griffith University)

The adoption of quasi-experimental research designs within 'real world' industries is commonly cited as being preferable, but too difficult to achieve; thereby justifying the adoption of descriptive cross-sectional research. This paper demonstrates that longitudinal research which includes control and experimental groups is in fact possible within two high-risk of stress industries: policing and corrections. The paper describes the design and results of two investigations each seeking to improve the occupational health of targeted samples of these employees. The advantages of a more considered research design for both the researcher and the partner organisations are discussed. Study One consists of a matched sample of 195 correctional officers who completed three self-report surveys over a three year period. Approximately half of these respondents had received an occupational

health training intervention. Study Two consists of a matched sample of approximately 500 police officers who completed two self-report surveys over a one year period. Approximately 100 of these respondents had received an occupational health intervention consisting of an organisational psychology component (supervisor training) and a physical health component (health promotion coaching program). The two investigations measured similar variables within each survey: job demands, job control, work engagement, support, job satisfaction, psychological strain, turnover intentions and work performance. Data were tested by both multivariate analysis (MANOVA, hierarchical multiple regression) and structural equation modelling and controlled for Time One criterion variables. The results for both studies demonstrate significant improvements over time for job satisfaction, psychological strain and work engagement, for the experimental groups in comparison with their respective control groups. This research demonstrates that longitudinal, quasi-experimental investigations are both achievable and successful among high-risk workers. The research also demonstrates the successful components of two occupational health interventions aimed at reducing stress and increasing well-being for police and correctional officers. The changes to working practices adopted by the two organisations in response to this research are discussed. The implications for improving the quality of reported occupational health psychological research are also discussed.

Keywords: occupational health, policing, corrections, high-risk industries, well-being

Organizational culture and positive work environments

Chair(s): PETITTA, L. (University of Rome "Sapienza")

Discussant(s): ASHKANASY, N. (UQ Business School)

This symposium will examine the role of organizational culture in shaping positive work environments and organizational effectiveness. Cultural underpinning is essential to managers' ability to motivate individuals and groups towards positive outcomes, and to manage their organization's social environment effectively. The aim of the session is to consider the status of theory and research in the organizational culture area and to discuss emerging directions for future research on key topics of organizational effectiveness and well-being. In line with this aim, the symposium includes one theoretical contribution presenting new issues and three papers outlining the findings of recent studies for future cultural research efforts to explore. The first paper reviews the findings relating to culture, with a main focus on the role of affective and emotional processes, and discusses three central cultural enablers of a 'Positive Work Environment': values in action; the shared norms leaders endeavor to enact among their employees; and employees' organizational knowledge structures. The second paper outlines the findings of a multilevel study on how cultural dimensions affect employees' perceptions of their context, their group and organizational collective efficacy, and both employee and organization oriented organizational effectiveness. In the third paper, the role of middle management commitment to change is investigated, with results from a eight years study suggesting that organizational culture and climate underpin organizational commitment during organizational change. The final paper addresses the relevance of catching organizational culture complexity for effective managerial action and intervention, by presenting findings on psychometric properties of a new combined typing and profiling measure of organizational culture, the Intensity and Strength Organizational Culture Questionnaire.

Overall, this symposium will relay the role of cultural dimensions in affecting employees' effectiveness, well-being and commitment to their organization, and will call for research to examine how organization-level factors enable actions of organizational members, at the individual and group levels of analyses, resulting in effective and positive work settings.

Organizational culture and the shaping of a positive work environment

HÄRTEL, C. (UQ Business School), ASHKANASY, N. (UQ Business School)

Understanding the cultural underpinning positive work environments is essential to managers' ability to monitor and manage their organization's social environment effectively. In this presentation, we argue that organizational culture is a key element of the work environment that determines the types and frequencies of affective events at work and their emotional consequences and subsequent effects on the actions of organizational members. We review the findings relating to culture in order to identify the cultural enablers of a 'Positive Work Environment' (PWE). We do this by considering three central elements of culture: values in action; the shared norms leaders endeavor to enact among their employees, and employees' organizational knowledge structures. Organization values in action as enablers. We identify three key organizational values in action which underscore PWEs. The first is emphasizing individuals' strengths and viewing negative behaviors as an organizational problem. Second is the encouragement and appreciation of positive emotional display and behavior. Third is the lived organizational value of justice and fairness. Shared norms as enablers. Organizations need norms to encourage some behaviors to occur and others to cease above and beyond that which formal rules and policies can prescribe. Whether norms are enabling depends upon whether they produce positive outcomes for individuals and groups in organizations or thwart them. Critical to establishing norms are the organizational leaders who shape these norms. We address in particular norms relating to emotional

processes, in particular, how emotion eliciting events are interpreted and subsequently responded to. Employees' organizational knowledge structures as enablers. Through interaction with and feedback from other organizational members and organizationally prescribed activities, employees gain, impart, and amalgamate knowledge of the organization and its culture. This then leads to knowledge networks that encourage all organizational members to take responsibility for ensuring a positive work environment. In concluding our presentation, we call for research to examine how organization-level factors shape, and are in turned shaped by affective processes at the individual and group levels of analyses, resulting in a Positive Work Environment.

Keywords: positive work environments, social environment, organisational culture, leadership, emotional processing

Collective efficacy, organizational culture and organizational effectiveness: Antecedents and consequences

ARKAN, S. (T.C. Okan University), SINANGIL, H. K. (Marmara University)

In terms of motivating their subordinates today's managers are not only responsible for motivating individuals but the groups as well. Collective efficacy which means groups shared beliefs in groups' capacities to accomplish a certain attainment is an important variable in motivational process, and previous studies denote its significant relations with groups' performance. This study is concerned with both the antecedents and consequences of collective efficacy in the organizational settings. In this study the sample consists of 933 employees working in different organizations. The multiple regression analyses conducted at both individual and group levels showed that some organizational culture dimensions of Denison's Organizational Culture Model and perception of context variables (top management, leader, group, and self efficacy of the employees) significantly affect group (GCE) and organizational (OCE) collective efficacy. Mission as a cultural dimension has the strongest effect on how the employees perceive their organization's top management

(.548, p : .00) and OCE (.609, p : .00). On the other hand Involvement dimension of organizational culture has the strongest effect on how employees perceive their colleagues in their work group (.451, p : .00) and GCE (.445, p : .00). Perception of group has the strongest effect on GCE (.681, p : .00), and perception of top management has the strongest effect on OCE (.581, p : .00). In terms of collective efficacy's consequences organizational effectiveness was analyzed. In the multiple regression analyses conducted at the organizational level it was found that all cultural dimensions of Denison's Organizational culture model significantly affect OCE (F : 95.36, p <.05) and adjusted R^2 of the regression analysis revealed that the changes in organizational culture dimensions explain 70% of the total variance in OCE. Moreover involvement (.625, p : .00) and mission (.225, p : .00) dimensions of organizational culture's have significant effects on employee oriented organizational effectiveness and mission (.623, p : .00) and adaptation (.225, p : .00) dimensions have significant effects on organization oriented organizational effectiveness. It was also found that OCE acts as a partial mediator between cultural dimensions of vision and involvement and employee oriented organizational effectiveness, cultural dimensions of vision and adaptation and organization oriented organizational effectiveness.

Keywords: collective efficacy, performance, organisational culture, organisational effectiveness, cultural dimensions

The relationship between organisational commitment and organisational culture and climate and its influence on organisational change

NAUGHTON, S. (The University of South Pacific)

Numerous studies have been conducted on the topics of organisational commitment, and organisational culture and climate over many decades. However, very few studies have empirically linked the three concepts, in particular to the process of organisational change. In this paper, I will focus on a study conducted on middle management commitment to organisational change and will

attempt to show how organisational culture and climate influences the commitment of middle management. In particular I will highlight and discuss the intertwined nature of organisational culture and climate that underpins organisational commitment during organisational change. While acknowledging the various studies and contributions on the topic, this paper will specifically focus on Turo's conceptual framework on organisational culture, climate and commitment. The study was conducted in a multinational company BHP (Billiton) over a period of eight years during which time the company underwent a radical transformation change including a reconceptualising of mission, vision leadership and culture change. A predominantly qualitative methodology was used within the interpretive paradigm. Organisational commitment is defined in the same way as in the studies of organisational climate and culture. Even though the term commitment is not used in the definitions, it is obvious that the idea of sharing values, goals and assumptions includes being committed to them. For example, Porter includes in his definition of organisational commitment a strong belief in and acceptance of the organisation's goals and values. Likewise, other writer's have described commitment in a similar way to that of organisational climate and culture. Turo argues that the concept of commitment can be best connected to that of organisational climate and culture and contends that "the strength of an organisational culture can be fruitfully analysed as the strength of commitment to an organisation". Thus, Turo provides a conceptual framework of commitment linking organisational culture and climate. He takes a different approach to explain the bases of commitment. Instead of compliance, identification and internalisation, he uses the trichotomy of obligations, utilities and emotions. The finding of the study provides empirical support to Turo's conceptual framework that specifically relates to middle management commitment to change.

Keywords: organisational commitment, organisational culture, organisational climate, leadership, goals

The combination of typing and profiling measurement of organizational culture: Validation of the Intensity & Strength Organizational Culture Questionnaire

PETITTA, L. (University of Rome "Sapienza"),
BARBARANELLI, C. (University of Rome
"Sapienza")

The study aimed at assessing the psychometric properties of a new combined typing and profiling measure of organizational culture, the Intensity & Strength Organizational Culture Questionnaire. It was developed in line with (a) Schein's (1985) theory; (b) Enriquez's (1970) typology of organizational cultures (autocratic, bureaucratic, paternalistic-patronage, technocratic, cooperative); and (c) Payne's (2000) multidimensional model of cultural Intensity (which varies from attitude to deeply rooted belief) and Strength (how many people express a cultural feature). 770 Employees from different private and public organizations returned the I&S-O.C.Q. 59.4% of the respondents were men, average age was 38 years, average organizational tenure was 12 years. The 65 items self-report questionnaire measured five cultural typologies within thirteen cultural areas, among which the increasingly more studied areas of emotions management and employees' well-being, identified from literature (Schein, 1992, 1999; Enriquez, 1970, Ashkanasy, Wilderom, Peterson, 2000). The answering scale was a two-parameter matrix of cultural intensity and strength. The total number of items (260) precluded to perform one single CFA. Five CFAs, one for each of the five cultures, were conducted to assess the structure of areas within culture and whether each item (attitude, behaviour, value, ingrained belief) loaded on the hypothesized factor (area). 13 CFAs, one for each of the 13 areas, were conducted to assess the structure of cultures within areas and whether each item (attitude, behaviour, value, ingrained belief) loaded on the hypothesized factor (culture). The five CFAs satisfied multiple goodness of fit tests (Hu, Bentler, 1999). The χ^2 across the CFAs were all significant ($p < .001$), the CFI ranged from .93 to .98, the TLI from .89 to .96, the SRMR from .25 to .46, and the RMSEA from .036 to .060. The 13 CFAs satisfied multiple goodness of fit tests.

The χ^2 across the CFAs were all significant ($p < .001$), the CFI ranged from .97 to .98, the TLI from .95 to .97, the SRMR from .24 to .34, and the RMSEA from .046 to .065. Overall, results supported the hypothesized factorial structure. The questionnaire allows the construction of a cultural profile for each of the 13 areas examined. Implications for intervention are discussed.

Keywords: psychometric properties, organisational culture, Intensity & Strength Organizational Culture Questionnaire, emotions, well-being

Organizational dynamics in entrepreneurship: Empirical evidence from China and Germany

Chair(s): WANG, Z. (Zhejiang University)

This symposium focuses upon emerging organizational dynamics in entrepreneurship on the basis of recent longitudinal empirical studies among small and medium-sized companies SMEs in China and Germany as well as studies on green entrepreneurship of new energy firms. The five presenters are active professors and scholars from both Germany and China who have collaborated in a number of empirical research projects on successful psychological factors in entrepreneurship among more than 350 Chinese companies and more than 350 German companies. Longitudinal data were collected from four different industries and cross-cultural research methods were further developed to test hypotheses about organizational dynamics in entrepreneurship process under globalization. The key learning objectives include: (1) an innovative methodology of shared construct development and cross-coding-validation is demonstrated through the four-year longitudinal cross-cultural comparative in-depth interview and questionnaire survey to provide learning for cross-cultural organizational psychology; (2) an organizational action model is put forward to enhance the understanding of action mechanisms for strategic entrepreneurship and its psychology; (3) both personal initiative and team initiative models are further developed to provide an integrated perspective in interpreting the dynamic interaction across levels of organizations and its effects on entrepreneurship performance; and (4) organizational dynamic capabilities are further studied through new industrial development and green entrepreneurship. Implications of organizational psychological research to entrepreneurship under globalization are highlighted in terms of new theoretical

framework building and cross-cultural methodology (supported by DFG Germany and NSF China).

Organizational dynamics in entrepreneurship change and learning: A collaborative model

WANG, Z. (Zhejiang University)

This paper reports a cross-cultural collaborative research model in understanding the successful psychological factors and organizational dynamics in entrepreneurship in China and Germany. The focus will be on the interaction between entrepreneurial change and entrepreneurial learning. A longitudinal study was carried out among more than 350 Chinese small-and-medium-sized companies (SMEs) (average $N=73$) and more than 350 German SMEs (average $N=13$). In-depth interview and questionnaire surveys were conducted along two different data collection periods. An innovative method was developed to conduct shared progressive construct development and cross-coding-validation. The results showed that there are more cross-cultural similarities than differences in organizational dynamic factors in relation with entrepreneurship performance. Entrepreneurship change and learning are key elements for dynamic capabilities. The innovative method of shared construct development and cross-coding-validation was a powerful tool in effectively carried cross-cultural research. Entrepreneurship change and learning strategy are significantly linked with performance and sustainability.

Keywords: *cross-cultural, entrepreneurship, entrepreneurial change, entrepreneurial learning*

Action strategies in small business entrepreneurship in China and Germany

FRESE, M. (National University of Singapore)

The aim of this paper is to present main empirical research findings on action model framework for understanding the action strategies in small business entrepreneurship in China and Germany. This paper will also provide a general research framework for

discussing the recent research on organizational dynamics in entrepreneurship under globalization. A longitudinal study was designed and carried out among more than 350 Chinese small-and-medium-sized companies (SMEs) and more than 350 German SMEs. In-depth interview and questionnaire surveys were conducted along two different data collection periods. An action model hypothesis was tested. The action model could explain large proportion of variance from the cross-cultural comparison between Chinese entrepreneurs and German entrepreneurs. Further organizational and cultural dynamic factors of change and learning are noticed and explained in supporting the hypotheses. The Action Model Framework has its generalizability validity for the understanding of cross-cultural entrepreneurship behavior on the basis of longitudinal research. Implications are discussed in relation to further research on psychological process of entrepreneurship.

Keywords: *entrepreneurship, China, Germany, longitudinal study, cross-cultural comparison*

Personal and team initiatives in entrepreneurship in China and Germany

RAUCH, A. (Erasmus University), XUE, X. (Zhejiang Science & Technology University)

This paper aims at presenting the empirical research on the key organizational dynamic factors: personal initiatives and team initiatives in small business entrepreneurship in Chinese and German firms. The focus will be put upon the conceptual development of team initiatives on the basis of personal initiatives in relation to the entrepreneurship activities among different types of industries. A new dynamic model of initiatives will be presented. A longitudinal study was carried out among more than 350 Chinese small-and-medium-sized companies (SMEs) and more than 350 German SMEs. Pilot interviews and questionnaires were developed and conducted for measuring both personal initiatives and team initiatives. Additional data was collected to test the hypothesized model of team initiatives and relationship with entrepreneurship performance and team efficacy. Lisral modeling was built and alternative models were compared. The results showed that both

personal initiatives and team initiatives were effective predictors for successful entrepreneurship in China and Germany. The two kinds of initiatives were more closely related to different levels of organizational dynamics in enhancing entrepreneurial performance. The key organizational dynamic factors are both personal initiatives and team initiatives in small business entrepreneurship among Chinese and German firms. The concept of team initiatives on the basis of personal initiatives has its stable dimensions and functions among different types of industries. The new dynamic model of initiatives has been demonstrated and implications are highlighted.

Keywords: *personal initiative, team initiatives, entrepreneurship, longitudinal study, performance*

Organizational dynamic capabilities in green entrepreneurship: An action perspective

LI, K. (Zhejiang University)

This paper aims at describing the organizational dynamic capabilities in green entrepreneurship using action model framework. It will present empirical evidence that the action model and organizational initiatives are the keys for success in emerging industries and green entrepreneurship. An in-depth multi-case method was developed and used in analyzing the key elements in using intellectual property strategy and progressive technology innovation under the framework of action planning and organizational initiatives. Specific scales were designed to measure green entrepreneurship orientation as well as action approaches and organizational initiatives. The results showed that the action model framework was effective in understanding new green entrepreneurship and relevant characteristics of organizational dynamic capabilities (ODCs). The ODCs are found to have close relationship with intellectual property strategy and progressive tech-innovation strategy and their performance. The organizational dynamic capabilities (ODCs) in green entrepreneurship were well based upon action model framework. The action model and organizational initiatives are the keys for the success in emerging industries and green

entrepreneurship. The ODCs are closely related with intellectual property strategy and progressive tech-innovation strategy and their performance.

Keywords: *entrepreneurship, organizational initiatives, green entrepreneurship, performance, organizational dynamic capabilities*

Organizational psychology confronts world poverty

Chair(s): MCWHA, I. (Massey University)

Discussant(s): REICHMAN, W. (Baruch College and the Graduate Center of the City University of New York)

Millions of people around the world in developed and developing countries are living in poverty. The reduction of poverty is the first United Nations Millennium Development Goal and thousands of individuals and hundreds of programs are working to achieve that goal with less than stellar success. Among those individuals are organizational psychologists who are working both at the applied “ground” level and at theoretical and research levels in an effort to bring the knowledge of our discipline to resolving this enormous problem. Four such people, representing many more involved organizational psychologists, are presenting their work and theories at this symposium. The first presentation will deal with the marginalized workers who are at risk of becoming unemployed and thus face barriers to their movement out of poverty. There are employees who are marginalized internally and externally and they are found in developed as well as developing countries. This presentation describes realistic steps for combating both types of marginalization. The second presentation will describe poverty alleviation programs in sub-Saharan Africa and its unintended consequences of promoting negative psychosocial outcomes such as depression and loss of self-efficacy. Data collected through a meta-analysis of poverty reduction programs strongly suggests that such programs must strengthen esteem and resilience in communities they serve. The third presentation will further examine the consequences of poverty reduction programs on those workers native to the country and those who are expatriates working in the program. Once again, there are unintended consequences that should be taken into consideration in developing such programs. The fourth presentation will deal with changes in the

psychological theory of economic growth. In 1984, Harry Triandis put forth a theory of economic growth which emphasized as key elements in economic growth, among other things, ease of extracting resources, and the local culture. Based on long experience in field research on poverty alleviation, this presenter will modify the theory by emphasizing entrepreneurship and the starting of new businesses as a way of combating poverty. A Discussant will relate the four presentations to activities that can be used in poverty reduction programs and lead an interaction with the audience.

Marginalization of the poor in and around organizations

MAYNARD, D. (State University of New York at New Paltz)

In this presentation, I will discuss how the poor are marginalized with respect to employment. Insufficient education and training are perhaps the greatest risk factors for unemployment or underemployment. Demographic variables such as gender, race, immigrant status, and single parenthood also affect the likelihood that someone will experience both poverty and employment difficulties. Those who are poor and without adequate means of making ends meet face social, economic, and organizational forces at both the market and organizational levels which serve as barriers to movement out of poverty. Being poor often means being restricted to employment that perpetuates the situation. Employment marginalization can be broken down into two forms. *External marginalization* comprises the ways in which the poor are unable to obtain quality employment which provides a living wage and decent benefits. Several sectors of the labor market rely on low paying jobs for those with limited education or training. Immigrants often experience poverty as a result of non-recognition of professional qualifications. Those below the poverty line are also unlikely to be connected to social networks that can result in opportunities for better employment or training. *Internal marginalization*, on the other hand, refers to ways in which the working poor are kept on the fringe of the organizations they work for. The lowest paying

jobs have the fewest benefits, often do not offer support or flexibility for managing family responsibilities, and are especially prone to layoffs. They also tend to have relatively little chance for growth or advancement. A lack of power and access can lead to exclusion from the organizational community. Individuals holding such jobs are seen as expendable because of the minimal education and training required, and the large numbers of potential replacements. I will describe how the nature of work and organizations may affect the extent to which the poor experience inclusion or exclusion. Then, I will explain how theories from social and industrial-organizational psychology (e.g., social learning, organizational justice) apply to the problem of marginalization. Finally, I will describe some realistic steps we can take to combat both types of marginalization.

Keywords: *marginalization, unemployment, poverty, immigrants, employment*

Psychological aspects of poverty alleviation programs

MPOFU, E. (University of Sydney)

The symposium will examine the psychosocial effects of poverty alleviation programs, including sense of control, sense of community, and empowerment. Poor people are regarded as undesirable and are forced to live in marginal areas, informal settlements and shacks, where society 'puts' them 'aside'. People living in such environments have to cope with disrespect, social exclusion, shame, and stigmatisation. Poverty creates disorganised living conditions, which expose poor people to multiple stressors and may affect their coping with stress negatively. Economic pressure has direct effects on elevated psychophysiological stress as well as on mental health. A meta-analysis of studies of psychosocial effects of poverty alleviation programmes in sub-Saharan Africa is the main method for this presentation. Articles for review include both white and grey literature and particularly contributed articles to a special issue of the Journal of Psychology on psychological effects of poverty (Vol 20, 2, 2010) and guest edited by the first and second authors. Preliminary findings suggest that

some poverty alleviation programmes designed for people in developing countries hardly focus on the psychological implications of poverty. Contrary to expectation, people of certain poverty alleviation programmes may be prone to psychological depression, and a loss of self-efficacy. They may perceive a lack of initiative, passivity, and apathy – characteristics that ensure that a person remains in poverty. The design of poverty relief programmes should include components to address the psychological effects of help-giving in marginalized communities. They should seek to strength the esteem and resilience of the host communities.

Keywords: *poverty alleviation programs, poverty, help-giving, self-efficacy, social exclusion*

Undermining poverty reduction work: Remuneration differences across six cultures

CARR, S. (Poverty Research Group, Centre for Psychology, School of Psychology, Massey University)

Despite the rhetoric of a single global economy, professionals in poorer countries continue to be remunerated differently depending on whether they are compensated locally versus internationally. Project ADDUP surveyed 1290 expatriate and local professionals (response rate =47%) from aid, education, government and business sectors in (1) Island Nations (Papua New Guinea, Solomon Islands), landlocked economies (Malawi, Uganda), and (3) emerging economies (India, China). Differences in pay were estimated using Purchasing Power Parity (PPP), calculated using the World Bank's World Development Indicators 2007. Psychological measures included self-reported pay and benefits (remuneration), comparative ability, remuneration comparison, sense of injustice due to remuneration-related (de)motivation, thoughts of turnover and international mobility. We included control measures of candor, culture shock, cultural values (horizontal/vertical individualism/collectivism), job satisfaction and work engagement. Controlling for these and country (small effects) and organization effects (medium), (a) international: local pay ratios

exceeded psychologically and materially comfortable thresholds among respondents remunerated locally; who also reported a combination of relative (b) injustice and (de)motivation; which (c) together with job satisfaction/work engagement predicted both turnover and international mobility. These findings question the wisdom of dual salary systems in general, expose and challenge a major contradiction between contemporary development policy and practice, and have a range of implications for poverty reduction work.

Keywords: *remuneration, job satisfaction, work engagement, poverty, poverty reduction*

A revised theory of economic growth

FRESE, M. (National University of Singapore)

In 1984 Harry Triandis wrote an article on psychological theory of economic growth. So it makes sense 26 years later to see where we stand with regard to his theory. I would like to present a speculative summary of what psychological contributions exist for a theory of economic development. Similarly to Triandis 1984 I will ask the question how culture and the difficulty of resource extraction have an influence on how we organize work and how we develop organizations. However, in contrast to Triandis I will also talk much more about the issue of how we start new organizations and how we innovate. In this way it becomes a much more entrepreneurship-oriented theory. In contrast to the theorizing that was done by Triandis in 1984 there is now also a greater wealth of empirical data that can be used to understand the relationships with economic wealth and economic development.

Keywords: *economic growth, economic development, culture, resource extraction, economic wealth*

Personal vs environmental factors in adjustment to life crises

Chair(s): MURPHY, G. (La Trobe University)

Discussant(s): ANDRASIK, F. (University of West Florida)

This symposium examines the relative contribution of “personal” as opposed to “environmental” factors in the development and maintenance of problem behaviours and/or effective coping with major life crises. Much research in applied psychology concentrates on attributes of the individual and the contribution of these attributes to performance in various settings. This symposium brings together a group of researchers interested in people’s adjustment to major life crises and in the relative contribution to various indices of adjustment made by both “individual” and “environmental” variables. Typically multivariate data analytic techniques are used to identify the effect sizes associated with variables from both groups of factors. Problem area examined range from coping with problem gambling to returning to work following traumatic injury. Key theoretical frameworks involved in the synthesis of study findings include those from behavioural, ecological and social psychology (such as Ajzen’s Theory of Planned Behaviour and Bronfenbrenner’s model of human development). The symposium, which will be comprised of four papers that address the relative contribution of “personal” and/or “environmental” factors in outcomes achieved, will be Chaired by Associate-Professor Greg Murphy, from the School of Public Health, La Trobe University. The Invited Discussant will be Professor Frank Andrasik, University of West Florida. Participants in the symposium will learn about particular individual as well as environmental variables that are associated with successful adjustment to the life crises studied. Within the set of identified correlates of successful adjustment there will be special examination of malleable factors involved in the development of, or response to, life crises.

These malleable factors have obvious implications for those applied psychologists interested in service delivery (both preventive and remedial services). Attendees will also be introduced to effect size measures used in multivariate studies of adjustment to life crises.

The contribution of injury, demographic and environmental variables to employment achievements one year after traumatic spinal cord injury rehabilitation

MURPHY, G. (La Trobe University)

The aim of this study was to identify the contribution of injury, demographic and environmental variables to reported employment status, at 12 months post discharge from rehabilitation following traumatic spinal cord injury. Participants were 72 patients discharged from a Sydney, Australia, Spinal Cord Injury Rehabilitation facility. Patients were assessed at discharge on a range of injury, demographic and environmental variables and then followed up 12 months later to identify their employment status. Predictor variables (10 in total) included two injury-related variables, four demographic variables and four environmental variables. Complete sets of data were available for 60 participants. Logistic regression was the main data analytic technique used to identify the individual and combined ability of predictors to identify those subsequently employed. Twenty were employed at follow up. Three independent predictors ($p < .05$) of the employment criterion were identified: one injury variable (functional independence at rehabilitation discharge); one demographic variable (pre-injury skilled occupation); and one environmental variable (score on community integration). Good classification accuracy was achieved (87% overall), and in combination, the set of predictor variables explained an encouraging 44.7% of criterion variance. In spite of a relatively low (27%) post-discharge employment rate, study results with respect to functional independence confirmed the traditional importance of physical rehabilitation services for improving patients’ chances of gaining subsequent employment. Pre-injury occupation was also confirmed as a predictor of post-injury employment. One of

the rarely-studied environmental variables (community integration) played a significant role in influencing post-injury employment. While the stability of the obtained results needs to be established, the results from the scores on the Community Integration Measure have identified social support services as potentially a valuable service to be strengthened within spinal cord injury rehabilitation programs.

Keywords: *injury, demographic variables, environmental factors, employment, rehabilitation*

Utilizing cluster analysis to profile successful return to work following an industrial accident

WILKS, R. (International Medical University)

The aim of this study was to examine which variables would improve the prediction of return to work (RTW) status among 43 workers who had experienced a work injury. Participants included 43 injured workers who had been referred for occupational rehabilitation after an industrial accident. Demographic and injury-related predictor variables included age at injury, gender, occupational type, type of injury, time involved in occupational rehabilitation, and the time from injury to referral to occupational rehabilitation. Attribution predictor variables included internal/external, stable/unstable, and global/specific. A Regression Analysis of RTW determined that the following variables accounted for 56% of the variance: specific-global attributions; timely provision of rehabilitation services; age of injured worker; and internal-external attributions. A Cluster Analysis utilizing the three attribution dimensions determined profiles of workers who successfully RTW. A post hoc qualitative and quantitative analysis of key factors for each profile was explored. It was concluded that rehabilitation professionals should focus on the importance of modifying distorted attributions and ensuring timely referrals.

Keywords: *prediction, return to work, work injury, occupational rehabilitation, industrial accidents*

Return to work expectations: Their formation and influence on return to work post injury

CANTY, J. (Swinburne University of Technology),
YOUNG, A. (Disability Research Center, Liberty Mutual)

A conceptual review of the rationale underpinning a program of research investigating both theoretical and empirical aspects of return-to-work (RTW) expectations will be presented. Following a review of the return to work literature, three foci for research projects within the research program are described: Study 1 focuses on defining and measuring RTW Expectations; Study 2 asks the question 'Why do RTW expectations relate to RTW outcomes?' And Study 3 involves an investigation of RTW Expectations Formation. Available results will be presented and discussed in terms of the relative influence of expectations (as opposed to other personal and environmental variables) on return to work following occupational injury.

Keywords: *return to work, work injury, expectations, personal factors, environmental factors*

Using an ecological approach to identify the antecedents of problem gambling

JACKSON, M. (RMIT University)

The aim of the research was to identify the determinants of problem gambling in Australia. The areas of interest were: demographic, psychographic, contextual and ecological variables. This study used a survey method on the general population ($N = 1408$) and used the Southern Oaks Gambling Screen (SOGS) to determine probable pathological gamblers. The overall predictive validity of the measured antecedents was $r^2 = .822$ for gambling behaviour and $r^2 = .812$ for probable pathological gambling behaviour. The main contribution to the explained variance was contextual and ecological variables. From a theoretical point of view, the notions of participation and activity within gambling and the five Bronfenbrenner ecological systems provided the best explanation re the causes of problem gambling. It was concluded that to

implement effective interventions with probable pathological gamblers, psychologists should focus on the contextual and ecological determinants of problem gambling.

Keywords: *problem gambling, determinants, demographic variables, contextual variables, ecological variables*

Personal, professional and political: Applications of feminist ethics to research and practice

Chair(s): GRIDLEY, H. (Australian Psychological Society)

Discussant(s): ALVAREZ WICKLEIN, R. (RMIT Counselling Service)

This symposium critically examines ways in which feminist principles, values and ethics can and have been applied to psychological theory, research and professional practice, and beyond to public policy and social activism. Guiding questions and related learning objectives across the four papers include: In what ways is social justice advanced by the development of gender-specific ethical guidelines and policies in psychology? What lessons might be learned from the historical accounts presented here of the development of such guidelines and policies? How much scope exists within psychology for the application of feminist principles, values and ethics? Is social activism really 'beyond psychology', or can our ethical codes, standards and practices be enriched by learnings from social movements? The first paper reviews the evolution of Canadian Guidelines for Ethical Psychological Practice with Women over the past 35 years, noting how gender inequality has been variously enacted and addressed across that period. The second paper offers a parallel overview of the development since 1990 of equivalent Australian ethical guidelines, drawing a comparison with the politics and processes associated with the concurrent emergence of another set of guidelines that have gendered implications. The third paper provides a critical analysis of the development and adoption by the Psychological Society of Ireland of a comprehensive policy on equality and inclusive practice, and considers why some dimensions of diversity received more attention than others in the implementation of the policy. Reaching beyond psychology and the academy to the domain of social activism, the

fourth paper examines the emergent ethics of the Pakeha Treaty movement in New Zealand. The author argues that feminist praxis and research helped to challenge traditionally accepted principles and norms for 'good research' in psychology, and that both were in turn challenged by a deeply rooted collective ethic developed in the Treaty movement. Taken together, the four papers across four post-colonial Western countries invite shared reflection on ethical decision-making in relation to gender equality and other dimensions of social justice.

The Canadian experience in the evolution of guidelines for ethical psychological practice with Women

PETTIFOR, J. L. (University of Calgary)

This paper reviews the evolution of Guidelines for Ethical Psychological Practice with Women from the 1975 United Nations Year of Women to the present time. The focus is on Canadian psychology. The content of significant documents, events, literature, and changing attitudes were reviewed with a view to identifying whether there was a need for updating the Guidelines. In the period of time under consideration there appeared to be an increase in the general acceptance of diversity, a decrease in overt sexist practices, and more subtle insensitivity or resistance to treating women with equality. The emphasis on proving that sexist practices exist gave way to addressing how to address women's issues of fairness and equality. Guidelines for psychological services for women need to be reviewed and updated on a regular basis. Guidelines need to be incorporated in all aspects of practice, such as professional education, continuing competence, standards for accreditation, supervision and research.

Keywords: *ethics, women, Canada, sexism, equal opportunities*

Squeaky doors and the politics of ethics: Developing Australian guidelines for psychological practice with women

GRIDLEY, H. (Australian Psychological Society),
NORTHFIELD, S. (Victoria University)

To present a historical overview of the development, eventual adoption and subsequent review by the Australian Psychological Society of a set of ethical guidelines for psychological practice with women. The guidelines were first suggested in 1990 by individual psychologists and by groups such as the Feminist Therapy Collective, following similar developments in Canada and the USA a decade earlier, but were not approved until 1996. Further revisions have since been made as part of a cyclic review process applied to all APS guidelines. A document analysis outlines the extensive consultation processes as well as institutional obstacles that formed a subtext to the evolution of the original guidelines and subsequent revisions. A comparison is offered with the processes that led to the development in 1994 of a set of Guidelines for the Reporting of Recovered Memories in the context of worldwide controversy surrounding the concept of 'false memory syndrome'. The paper elucidates the respective rationales for the development of both sets of guidelines, with reference to the politics and processes of disciplinary stasis and change. This historical investigation reveals 'good news and bad news'. A direct outcome of the debates surrounding both sets of guidelines was the establishment of the APS Ethical Guidelines Committee which has overseen the development and review of all of the Society's ethical guidelines since 1998. A new Code of Ethics in 2007 incorporated terms such as 'respect' and 'justice' as core principles for the first time, but their operationalisation remains a somewhat contested work in progress. The paper concludes with consideration of the relationship between ethical guidelines and standards or codes of ethics, their value as educative tools, and some lessons learned from this twenty-year saga. And a final question is raised: whatever happened to the Feminist Therapy Collective?

Keywords: *ethical guidelines, women, feminism, feminist therapy collective, codes of ethics*

Developing a policy for equality and inclusive practice: the Irish experience

MOANE, G. (University College Dublin)

The aim of this paper is to provide a critical analysis of the development of a policy on equality and inclusive practice by the Psychological Society of Ireland (PSI). This analysis includes firstly identification of specific historical and contemporary aspects of the Irish context that have created an unusual combination of equality awareness and policies, prejudice, and unique patterns of immigration and ethnic diversity. The presentation draws on documentary analysis to chart the development of the policy and its implementation. The findings show that the policy is comprehensive and broad in scope, and was quickly adopted by the Council of the PSI. A more detailed analysis of implementation following adoption of the policy shows that gender received very little attention, while sexual orientation and ethnic diversity attained considerable profile. This presentation considers why this was the case.

Keywords: *equal opportunities, Ireland, immigration, ethnic diversity, gender*

Does a social movement require higher ethics than the academy? Following feminist and anti-racism movement ethics for rich research outcomes within and beyond psychology

HUYGENS, I. (University of Waikato and Waikato Institute of Technology)

The Pakeha Treaty movement is a social movement of primarily white women challenging racism and colonialism in New Zealand. Groups of activist educators formed throughout the country during the 1970s and 1980s. Today, they continue their work of strategic education about the Treaty of Waitangi, the original agreement for settlement. The ethics of the movement drew upon feminist praxis and research, including a commitment to transparent collective theorising, practice and accountability. The aim of this paper is to explore how my doctoral research intersected with these ethics, and challenged traditionally accepted principles for 'good research' in psychology, such as

confidentiality, anonymity and individual self-reflection. This paper presents the processes developed as I recorded the theorised practice of 10 Treaty educator groups. I positioned myself as an insider Treaty educator remaining accountable to the ethics of our social movement, and responded to challenges from participants for transparent, shared interpretations that would reflect 'the work of many others'. This necessitated revision of consents to allow identities and authorship to be known and acknowledged at a national level. As a result, an innovative method of visual and verbal theorising between successive groups developed, culminating in a national sharing of our contemporary practice. The new method deepened the movement's collective knowledge and led to useful educational resources – a series of visual theories published in a book and a DVD/video. By following stringent ethics for collective accountability and transparency developed by feminist and anti-racism social movements, I obtained significantly richer research outcomes than had I followed more traditional research ethics. Feminist praxis and research helped to challenge academic norms, and both were in turn challenged by a deeply rooted collective ethic developed in the Treaty movement. I will discuss implications for the researcher purporting to explore 'new' knowledge relating to women and psychology.

Keywords: *New Zealand, ethics, Pakeha Treaty movement, women, racism*

Personality and situational influences on political attitudes

Chair(s): HUDDY, L. (Stony Brook University)

The goal of this symposium is to examine the origins of political attitudes in stable enduring influences such as personality attributes and compare this with the influence of situational factors such as environmental threat, or new information about a political actor. The speakers include a number of internationally prominent political psychologists who will discuss foundational theories of political psychology including the affective origins of political attitudes, the political effects of personality traits, and political information processing. Papers will discuss the application of these theories to a diverse array of political attitudes including support for immigration policy, policies designed to ameliorate racial inequities, support for specific political candidates, and attitudes towards political institutions. The sessions' key learning objectives include understanding factors that promote stability and change in political attitudes, seeing how psychological theories can be applied to political attitudes, and shedding light on the dynamics of public opinion. The first presenter will provide an overview of the emotion system and explain how emotions dictate whether political attitudes and behavior are habitual or respond to ongoing events. He will provide examples of the way in which emotional reactions dictate whether voter decision making in U.S. presidential elections depends on stable partisan affiliations or responds to specific campaign events and information. The second presenter delves more deeply into the stable origins of political attitudes by examining the impact of big-five personality factors on attitudes toward different kinds of immigrants to Australia. The third presenter examines stable prejudicial sources of white opposition to racial policies in the U.S. and contrasts this with other racial attitudes that also drive policy opinions but are rooted less in prejudice than ongoing assessments of discrimination in US society. Finally, the fourth presenter examines the degree to which

Cypriots respond to negative information about a political body (in this instance a water authority) based on their prior views of it, and then examine the degree to which this reactivity to negative information shapes their willingness to comply with regulations issued by the authority.

The theory of affective intelligence: A primer and applications

MARCUS, G. (Williams College)

This paper provides a brief primer on the theory of affective intelligence and reviews its application to politics. The theory of affective intelligence is a "dual process" model. It posits that people have two distinct approaches to judgment and behavior: 1) reliance on habits or what Bargh calls "automaticity"; and, 2) reliance on explicit thoughtful considerations. It differs from other such dual process models in that both stages depend on preconscious affective appraisals that produce distinct emotions. It differs from other theories of emotion by relying on a dimensional structure of emotion (as contrasted with discrete structural models) and by asserting that the primary functions of emotion are preconscious, thus altering the fundamental link between affect and cognition from spatial (e.g., peripheral v central, subconscious v conscious) to temporal (before and after). A review of theories and recent research findings on the link between affect and political decision making processes. Among the principal findings are that anxiety affects attentional focus by increasing political attention in general, and especially to threatening stimuli; reduces reliance on political heuristics such as ideology and partisan identification; and is linked to a deliberative mode of citizen reasoning. A review of these findings in and during political campaigns and outside of the campaign periods is given as well. A summary review of its current state of development is also offered.

Keywords: *affective intelligence, politics, decision making, habits*

Immigration attitudes as a function of big-five personality traits
BOLDERO, J. (Melbourne University)

Australia is a country of migrants. In 2006, only 2.4% of the Australian population was Indigenous Australians and 44% were either born overseas or had at least one overseas-born parent. Furthermore, despite relatively high levels of migration, racism and negative attitudes toward migrants are relatively prevalent (e.g., Pedersen & Walker, 1997). However, research has treated migrants as a homogeneous group and focused on group-level predictors of these attitudes (e.g., nationalism). The present study was designed to examine whether (1) attitudes toward a range of migrants are heterogeneous and (2) the individual and group-level predictors of these attitudes. Participants were 280 students (209 females) who were either Australian-born in Australia or had lived in Australia for at least five years. They indicated how many migrants from 13 different migrant groups (e.g., migrants from the Middle East, refugees, and skilled migrants) should be allowed to migrate to Australia, relative to current levels. They also completed measures of the 'Big Five' personality factors and nationalism. Exploratory factor analyses yielded three correlated factors: attitudes toward skilled and culturally dissimilar migrants, and refugees. No factors predicted attitudes toward skilled migrants whereas attitudes toward culturally dissimilar migrants were positively associated with openness and agreeableness (Step 1), and positively associated with agreeableness and negatively associated with nationalism (Step 2). Attitudes toward refugees were positively associated with neuroticism and agreeableness (Step 1) and with these factors and negatively associated with nationalism (Step 2). Australians do not view migrants as a homogeneous group. Rather, they differentiate between those who are skilled, those who are culturally dissimilar, and those who need help and protection. Furthermore, although all appear to see the value in allowing the migration of skilled individuals, it is those who are more open to experience and agreeable who have more positive attitudes toward the culturally different. Further, although the impact of openness is mediated by nationalism, this factor does not mediate the impact of agreeableness or neuroticism. Together, the results indicate that it is important to consider individual-level factors

along with group-level ones when understanding attitudes toward different migrant groups.

Keywords: *immigration, big-five personality traits, racism, attitudes, nationalism*

Beyond prejudice: The structure of white racial attitudes

CAPELOS, T. (University of Surrey)

The role of racial prejudice in driving white racial policy opposition has been the subject of a prolonged debate among researchers of American race relations. But racial attitudes may reflect more than simple prejudice, and indeed we argue are multi-dimensional. We develop a tripartite system of racial attitudes that begins with *overt prejudice*, beliefs linked to a view of inborn black inferiority that has been prematurely dismissed as politically irrelevant. We further decompose white racial beliefs into two additional components that underlie racial resentment: The *denial of racial discrimination* in contemporary American society, and the belief that blacks *lack motivation* and values needed to get ahead. These two dimensions correspond roughly to an external and an internal explanation for a lack of black success and have been noted by other race researchers. The current paper is designed to test the validity of this proposed structure. We draw on data from the American Racial Opinion (ARO) survey conducted as an RDD telephone interview of U.S. residents from October 23, 2003 until February 23, 2004. Analyses are based on data from all white, non-Hispanic, non-Asian respondents ($N=1,229$) drawn from a total of 1,583 respondents overall. Using original national survey data and a new battery of race-related items, we show that this three dimensional structure captures well the variation in Americans' attitudes towards the origins of racial inequality in economic and educational outcomes. Contrary to current measures of racial resentment in which internal and external explanations for racial inequality are inextricably linked, we find virtually no relationship between whites' denial of racial discrimination and the view that blacks lack the motivation to get ahead. There is, however, a substantial correlation

among whites between belief in a lack of black motivation and overt prejudice. We then show that this three dimensional model accounts for a broad range of other measures of racial attitudes including racial resentment and racial stereotyping. We conclude by demonstrating the utility of this model for understanding whites' racial policy positions.

Keywords: *prejudice, racial attitudes, white racial policy, denial, inequality*

Institutional reputations, citizens' evaluations, and scandal impact

FELDMAN, S. (Stony Brook University)

This paper has several aims. First, it investigates the degree to which prior reputation mitigates the effect of a scandal on a political institution (in this instance a water authority). Past research has documented that a prior reputation for competence helps an individual politician to weather a scandal better than a reputation for integrity. The paper examines whether such prior beliefs have a similar effect on the reputation of a political institution. Second, I examine the consequences of an institution's reputation on citizen compliance with its regulations. I thus test the following hypotheses: (1) a positive institutional reputation determines whether citizens comply with its recommendations and policy proposals; and (2) the effects of a prior reputation for competence protects against a scandal more effectively than an honest reputation. The blame management literature suggests that competence reputations of candidates are more resilient than integrity reputations. I test these hypotheses with two nationwide surveys conducted in Cyprus in the spring and fall of 2009. Specifically, I examine the reputation of the Water Authority agency before and after a scandal. I examine the ingredients of the institutional reputation before and after the predicament and measure citizen compliance to the water authority's recommendations concerning water conservation. I find that the authority's perceived competence and integrity have differing effects on level of compliance with water conservation regulations and with levels of satisfaction with the political process more

generally. This political psychology study fills a significant gap in the literature on the determinants of institutional reputations and their impact on citizens' behaviour.

Keywords: *institutional reputations, evaluation, scandal, political institution, competence*

PhD Programmes from students' perspectives

Chair(s): SAGANA, A. (Maastrich University)

The continuously increasing demands of working labour and the constant internalization of working context at an international level have contributed to the increasing number of students who are looking for a higher level of education. Masters, nowadays, is considered as basic qualification of a well-trained psychologist. Developments regarding the psychologists training as for example the Bologna Process and the creation a European Higher Education Area (EHEA) by 2010 to promote the European system of higher education worldwide brings universities and students in front of an era of change. Students interested in proceeding towards a PhD, meticulously examine the different programmes and many of them are ready to leave their countries in the chase of a high quality programme. But how similar are PhD programmes around the world? Is it worth the effort? If yes, what are the requirements? In order to answer all these questions we asked universities, holding PhD programmes in psychology, from all over the world to indicate what are the most important requirements for a successful PhD student. What is more, grant options and job opportunities have been under our scope of research. Academic mobility, prior and after the successful completion of a PhD, will be discussed.

Carrying out a PhD in Europe

POTOCNIK, K. (IAAP, Student Division President)

Before the reforms in higher education systems in European countries took place (that led to the implementation of European Higher Education System), PhD programs were substantially different across European Countries. For instance, in Spain PhD programmes included one year of obligatory course work, focused toward the acquisition of specialised knowledge and research skills. In contrast, in Germany or the Netherlands no

such courses have been obligatory. With the Bologna system that sets a Master degree as a minimum level of education for professional practice (60 ECTS) and a requirement for perusing a PhD, obligatory course work in the beginning of the PhDs has been abolished in Spain and other European countries. This presentation will address differences and similarities of the PhD programs between European countries. Moreover, we will present funding options for carrying out a PhD research as well as for academic mobility.

Keywords: *higher education, Europe, PhD programs, education, academic mobility*

Aspects of America. North and South: How similar, how different

PENA, M. (Universidad Nacional Mayor de San Marcos), HASAN, N. (University of Houston-Downtown)

This program is part of a larger symposium about doctoral training in psychology from around the world. This specific presentation covers the process of earning a doctoral degree in psychology in North and South America. There are significant differences in psychology training in North and South America. First, we will discuss the training process in South America, with a discussion about doctoral level training. Doctoral level education is not the norm for psychology training in South America, and we will discuss the benefits and limitations to this level of training. Next, a discussion about doctoral training in North America will be discussed with a focus on doctoral level training. Doctoral level training is the minimum required degree for individuals who wish to be called "psychologists" and practice in North America, specifically in the United States of America. We will discuss the standard undergraduate requirements, general admission requirements to a graduate program, program accreditations, and program specialization. Finally, a discussion about the similarities and differences in psychology training in North and South America will be provided.

Keywords: *doctoral training, psychology, America, specialization, program accreditations*

Carrying out a PhD in Australia

CLARKE, K. (Monash University)

The PhD was first introduced in Australia in 1948. Since the 1990's there has been a growth spurt in the number of students undertaking PhD's, particularly in the Health Sciences area. As a result there have been changes in the traditional PhD rules to accommodate new professional specialties, including ways that research can be carried out, and new ways of presenting theses (i.e. thesis by publication). Further, in the 1990's professional doctorate programs were introduced by Australian Universities to accommodate the need for a combination of professional coursework and a substantial research thesis. Entry into PhD programs in Australia is competitive, with a requirement of a first class honours in most cases. Australian-citizens and other eligible PhD students in Australia are not charged course fees as these are paid for by the Australian Government under the Research Training Scheme. PhD students are sometimes offered a scholarship to study for their PhD degree. The most common of these is the government-funded Australian Postgraduate Award (APA), which provides a living stipend to students of approximately AU\$ 20,000 a year (tax free). Most universities also offer a similar scholarship that matches the APA amount, but are funded by the university. In addition to the more common APA and University scholarships, students also have other sources of funding in their PhD degree such as scholarships offered by schools, research centres and commercial enterprise. The aim of this presentation is to present results of a survey of Australian Universities that offer a PhD program in psychology with regard to requirements of entry, PhD student attributes and funding opportunities. Further, academic mobility prior to and after the successful completion of a PhD at an Australian University will be discussed.

Keywords: *Australia, research, doctorate training, scholarship, Australian Universities*

Positive and negative aspects of adolescent relationships: Attachment and aggression as influential forces

Chair(s): WILKINSON, R. (The Australian National University)

Discussant(s): MOORE, S. (Swinburne University)

The APS Psychology of Relationships Interest Group encompasses active researchers and practitioners who have relationships as a central concern of their work. This symposium focuses on presenting research from members of this group who are particularly interested in understanding both the positive and negative aspects of emerging adolescent relationships. The first two papers report on individual differences and normative aspects of attachment in adolescence. The first paper reports on the applicability of the dominant self-report assessment approach to individual differences in attachment for adolescents and young adults. Support is found for the two factor model of anxiety (hyperactivation) and avoidance (deactivation) although concerns are raised about how this relates to assessing attachment in particular relationships. In the second paper the presenters map out differences in the normative aspect of attachment transfer in adolescents by examining the attachment networks and how different aspects (or functions) are fulfilled by different members of the network. Support is found for the transfer hypothesis in that peers, and particularly romantic partners, take on increasing importance from an attachment perspective. In the next two papers the importance of both peer and romantic relationships for adolescence are highlighted. The presenters examine relational aggression and victimization in adolescents and their peers and how these are related to adjustment. They find that while aggression may have some 'pay-off', both relational aggression and victimization, particularly when isolating, still have negative consequences. In the final paper the presenter

demonstrates how an intervention aimed at abuse in adolescent couple relationships may be beneficial. Relationships early in adolescence can set the pattern for later relationships and by intervening early with relationship assertiveness skills training it is hoped that the cycle of abuse may be broken. The key learning objectives from this symposium are: (1) to better understand the nature of both individual differences and normative attachment representations in adolescence and the emerging importance of peer and romantic relationships, and (2) to appreciate how relational aggression and victimization effect adolescent adjustment and how interventions aimed at this age group can have benefits at both personal and social levels.

Development of a general short-form of the Experiences in Close Relationships – Revised questionnaire to assess attachment in adolescents and young adults: A multi-sample study

WILKINSON, R. (The Australian National University)

The 36-item self-report questionnaire Experiences in Close Relationships – Revised has emerged as a widely used tool to assess individual differences in attachment anxiety (hyperactivation) and avoidance (deactivation) in samples of adults with romantic relationship experience. However, both the length of the instrument and its reference to experiences with romantic partners limit the extent to which it can be employed with younger individuals. This paper reports the results from two studies evaluating a new general, short form (20-items) of the ECR-R, the ECR-R-GSF, which has had items modified to refer to relationships in general. In study one the factor structure and convergent validity of the ECR-R-GSF is investigated with 694 high school and college students aged from 14.5 to 22.9 years. In study two the structural model was assessed with an independent sample of 493 high school students aged from 11 to 19 years. Confirmatory factor analysis supports a two factor anxiety and avoidance model consistent with the original ECR-R. The factors relate appropriately to the Relationship Questionnaire (Bartholomew & Horowitz, 1991) dimensions and categories. The ECR-R

GSF dimensions were found to have moderate correlations with the Inventory of Parent and Peer Attachment – Peer scale (Armsden & Greenberg, 1987) but weaker correlations with the Maternal and Paternal Attachment Scales. The factor loadings and variances were found to be invariant across the samples. Multi-group analyses for the combined samples demonstrated that the model was consistent across age and gender. Overall, the results indicate that the ECR-R-GSF is a potentially efficient and appropriate way to assess trait attachment hyperactivation and deactivation in adolescents and young adults. Importantly, the results indicate that there may be major differences between these constructs and specific attachment relationships as assessed by instruments such as the IPPA. The need to consider different levels of attachment abstraction in adolescence is discussed.

Keywords: *close relationships, attachment, adolescents*

Attachment reorganization in adolescence: Straight-forward or complicated?

GOH, D. (The Australian National University)

The purpose of the present study is to examine the processes of attachment reorganization in an Australian adolescent population. Attachment reorganization is a normative developmental process which chronicles adolescents increasing orientation towards their peers, such as friends or romantic partners, for the fulfillment of attachment functions. By late adolescence it is argued that a romantic partner usually replaces parents at the top of the attachment hierarchy, and becomes the primary attachment figure for the individual. Attachment reorganization has been found to vary accordingly with age, gender, the presence (or absence) of a romantic relationship, and even with attachment functions themselves. This study also aims to identify individual similarities and differences in the process of attachment reorganization amongst Australian adolescents. Self-reported attachment to mothers, fathers, friends and romantic partners of cohorts of early adolescents (109 females and 74 males) and late adolescents (239 females and 90 males) is examined in a cross-sectional study using the

modified Attachment Network Questionnaire (Doherty & Feeney, 2004). Results of two, mixed-design Analysis of Variance (ANOVA) procedures are consistent with the process of attachment reorganization in adolescence, with adolescents' preferences for specific attachment targets differing according to attachment functions, their age, gender, and romantic status. Adolescents increasingly orient towards peers, and away from parents for attachment needs as they age, with this process facilitated by the presence of a romantic relationship. The increasing importance of the romantic partner as an attachment figure is correspondingly demonstrated. Adolescent females also show greater preference for friends as targets while adolescent males turn to their fathers, particularly for the attachment functions of Safe Haven and Secure Base. Although attachment reorganization is a normative developmental process which occurs in a chronological and sequential fashion, there are inherent complexities in the form of individual differences which can facilitate or impede its movement. It is imperative for future research to account for both the normative and individual differences in attachment to provide a more holistic view towards understanding attachment in adolescence. Clinical applications for understanding the implications and effects of attachment reorganization are discussed.

Keywords: attachment, reorganization, adolescence

The socioemotional problems, social prominence and motivations associated with relational aggression, connected victimization and isolated victimization

PRONK, R. (Griffith University)

Despite recent research on relational aggression (RA) and relational victimization (RV), questions still exist regarding how RA and RV can be associated with good behaviours and high status among peers at school at the same time that they can be detrimental to mental health. In the current study, RA and two types of RV were examined to assess their independent and unique associations with adolescents' socioemotional functioning, social

standing and motivations for aggression. Participants were 335 adolescents (9 - 15 years; 53% girls) who reported who among their school peers was aggressive and victimised using nomination techniques. Each student completed questionnaires about their own RA, RV, depressive symptoms, social anxiety, peer social standing, perceptions of exclusion, and social motivation (i.e., dominance & affiliation). Factor analyses identified 2 forms of RV: connected (i.e. centre of peers, being 'spoken about') and isolated victims (i.e. rejected from peer group). RA and both RV forms were associated with more depression and anxiety, with strongest associations with isolated RV. RV was more strongly linked with girls' than boys' depressive and anxiety symptoms. Perceptions of peer group exclusion and distrust mediated associations between RV and mental health symptoms. Those who were aggressors and higher in connected RV were more socially prominent, but those higher in isolated RV were lower in social prominence, more rejected and unpopular. Adolescents who self-reported more RA had more dominance motivations, those higher in connected RV reported fewer affiliation motivations, and those higher in isolated RV reported more dominance and fewer affiliation motives. RA and both forms of RV have negative implications for adolescents' socioemotional functioning, but RA and connected RV also are accompanied by peer social prominence; it is isolated RV that seems most detrimental to mental health, seeming particularly problematic for girls. RA may be a method that some adolescents, rely on to maintain/gain social prominence in the peer group; however functioning appears to be compromised in the process. Motivations for affiliation may be lower because adolescents have experienced RV regardless of whether they are connected or isolated victims. Application of findings will be discussed.

Keywords: relational aggression, victimization, adolescents

Efficacy of skills-training for increasing adolescent girls' propensity to resist abusive couple dynamics

MURPHY, K. (RMIT University)

Abusive couple relationships are associated with adverse outcomes for the partners involved and for children exposed to the abuse. Preventing chronic partner abuse requires a complex mix of interventions which address individual through to societal risk factors. It has been argued that interventions for adolescent girls beginning to engage in couple-relationships are important to include in this mix. This paper presents the evaluation results of a group-based training program designed to reduce adolescent girls' vulnerability to chronic partner abuse by increasing their motivation, skills, and self-efficacy to resist the development of abusive couple dynamics. The paper begins with an overview of the existing literature regarding how best to ensure that psycho-educational programs for youth (a) bring about desired attitudinal shifts and behavioural changes and (b) are experienced to be empowering by the program participants. After the content of the evaluated program is briefly overviewed, quantitative and qualitative findings of the evaluation are presented. The evaluation comprised of a waitlist controlled pre- to post-test study involving 147 girls aged 13 to 17 years. Risk-sensitivity, self-agency beliefs, victim-blaming attributions, and hypothetical responses to warning-sign scenarios were measured prior to and three to four months subsequent to the intervention group's participation in the program. The evaluation data show that by involving girls in structured but autonomy-promoting group-based training activities, positive attitudinal and behavioural shifts can be achieved. For example, three to four months following the training participants' responses to hypothetical warning-sign partner behaviours were less accommodating and/or less aggressive than before the training. Moreover, although participants reported greater perceived self-agency in the context of their couple-relationships after the training, initial victim-blaming attributions tended to wane. Overall, the results of this evaluation suggest that relationship-specific assertiveness training for adolescent girls in westernised nations is a worthwhile component in multilevel strategies designed to reduce the prevalence and impacts of chronic partner abuse. The implications of these findings for

working with young men as well as young women are discussed.

Keywords: *abusive couple, assertiveness training, adolescents*

Positive and negative consequences of stress at work

Chair(s): DE BRUIN, G. (University of Johannesburg)

Discussant(s): DOLLARD, M. (University of South Australia)

This symposium examines the proposition that stress at work can—under certain conditions and for some employees—have positive consequences, such as engagement, satisfaction and growth. Whereas the link between job stress and negative outcomes is well established, less is known about the conditions under which positive outcomes occur. The theoretically and appealing idea that the availability of adequate job resources can turn the negative effects of high job demands into positive effects has proved difficult to demonstrate empirically. In addition, more knowledge is needed about the moderating role that person variables play in the stress-outcome process. The papers in this symposium investigate the conditions under which, and for whom stress may lead to positive or negative outcomes. The papers examine (a) the role of management level as a moderator of the effect of demands on job outcomes, (b) whether the moderating effect of job resources are more likely to be observed when resources are explicitly matched with job demands and outcomes, and (c) the longitudinal effect of stress in the relations of demands with positive and negative job outcomes. It is hoped that the symposium will contribute to a better understanding of how working conditions may be structured to promote positive consequences and for whom these consequences are most likely to be observed.

Are top executives different? Management level as moderator of the relation between job scope and positive and negative work outcomes

HAHN, V. (Johannes Gutenberg University),
DORMANN, D. (Johannes Gutenberg University),
STOCK-HOMBURG, R. (Technical University
Darmstadt)

Top executives strongly influence the performance of organizations. However, empirical research that particularly focused on the group of top executives is scarce. We propose that top executives warrant special attention because common findings from other samples which are more frequently studied (e.g. lower level managers) may not apply to this group. Specifically, we examined whether top managers differ from middle managers with regard to consequences of common job-related variables. We used the job characteristics model as a framework to examine whether relations between job-related variables and motivational and strain outcomes are dependent on the management level. Particularly, we hypothesized that relations between task and skill variety, person-job fit and job control and positive and negative work outcomes (job satisfaction, job enjoyment, exhaustion, cynicism) are stronger for middle level managers than for top managers. 202 managers responded to a questionnaire containing measure of task and skill variety, person-job fit, and job control on the one hand and positive motivational outcomes (job satisfaction, job enjoyment) and negative strain outcomes (exhaustion, cynicism) on the other hand. In addition, managers' partners provided ratings of the outcomes measures. Results of hierarchical regression analyses showed that the relations between job-related variables and positive motivational outcomes (job satisfaction, job enjoyment) and negative strain outcomes (cynicism) were moderated by the management level. The positive relations of job-related variables with job satisfaction and job enjoyment and the negative relation of job-related variables with cynicism were stronger for middle managers than for top executives. This pattern of results also showed for the partner ratings of positive and negative outcomes. No interaction effects were found for exhaustion. Our findings show that top executives differ from executives of lower management levels. Motivators (e.g., job scope) that are effective at the middle management level are not equally effective at the top executive level. Similarly, demands or lack of resources do not as strongly impact on strain among top managers as they do among middle managers. These findings underline our

proposition that top executives present a special group that should be studied separately from lower level managers. Future research should aim at identifying critical job-related variables that are specific for top executives.

Keywords: *performance, management, job characteristics, job satisfaction, job enjoyment*

Customer-related social stressors and their consequences for service providers' negative and positive affective reactions

DUDENHOEFFER, S. (Johannes Gutenberg University), DORMANN, D. (Johannes Gutenberg University)

Previous research has shown that customer related stressors (CSS) have detrimental effects for service providers' well-being. We used threat to perceived justice as the central mechanism to explain the stressfulness of CSS. The aim of the study was to extend the knowledge about consequences of CSS (1) by analyzing short term changes in service providers' negative and positive affective reactions as immediate consequences of CSS, (2) by comparing intra-individual as well as inter-individual effects, and (3) by investigating causality and reversed effects of CSS. We employed a diary design with three measurement occasions per day (before work, after work, before bedtime) over five consecutive working days and a short-term longitudinal design with two general surveys (interval: 14 days). For both designs we used the same sample of 151 employees from public service organizations. Diary data showed that CSS cause service providers' negative affective reactions even after controlling for other sources of social stress (supervisors, co-workers, persons of the private life). However, we did not find effects on positive affective reactions. Longitudinal data showed that CSS increase negative affect but has no effect on positive affect. We also found empirical evidence of reversed effects of service providers' affect on CSS. Pattern of results were similar for inter-individual and intra-individual effects. Customers represent an important source of social stress for service providers. Reversed effects of service providers' affect to CSS indicate vicious cycles between customers' and service providers'

behaviours. Similarities of inter-individual and intra-individual effects show that a single theoretical mechanism might be sufficient, which is assumed to be threat to perceived justice. To prevent negative consequences of customer-related stressors we considered counterbalances to customer-related stressors to restore justice and inhibit negative affective reactions. We suggested supportive behaviours by supervisors and co-workers as possible counterbalances.

Keywords: *customer related stressors, well-being, public service organizations, social stress, longitudinal data*

High job demands can have positive consequences: The moderating role of matching job resources

NEL, J. (University of Johannesburg)

A large body of research has demonstrated an additive effect of job demands and job resources on strain related job outcomes, such that high levels of demands and low levels of resources lead to strain. By comparison, relatively few studies have (a) demonstrated an interactive effect between demands and resources, and (b) focused on growth related rather than strain related outcomes. One reason for the failure to observe the interactive effect is that researchers have failed to match the type of job demand with the type of resource. Such an interactive effect has important implications in the sense that appropriate resources may potentially turn the negative consequences of high demands into positive consequences, such as increased work engagement. In accord with the Demands-Induced Strain Compensation (DISC) Model this study examines whether workers can flourish under high demands when resources and outcomes match the type of demands. 348 adult workers representing a wide variety of occupations completed measures of cognitive and emotional demands and resources on the one hand and measures of growth related outcomes (work engagement, self-efficacy expectations and happiness) on the other hand. Hierarchical regression analysis revealed that emotional resources significantly moderates the relation between emotional demands and work engagement, high demands

coupled with low resources led to reduced engagement, but high demands coupled with high resources led to improved engagement. Similar, but weaker moderating effects were observed for happiness (emotional demands and resources) and self-efficacy (cognitive demands and resources). The findings show that optimal combinations of matched job demands and job resources can produce growth in positive work outcomes, such as engagement, self-efficacy and happiness. In accord with predictions of the DISC Model, appropriate job resources have the potential to change job demands from producers of strain into producers of motivation, confidence and engagement. The findings provide support for the proposition that the moderating effect of job resources is most likely to be observed when the resources match the demands and the outcomes of interest.

Keywords: *job demands, job resources, work engagement, self-efficacy, happiness*

High job demands need not lead to poor health: The moderating effect of matching job resources

DA SILVA, A. (University of Johannesburg)

Research has established that excessive job demands are associated with poor health and other negative job outcomes, such as burnout and social dysfunction. This study tested the hypothesis of the Demands Induced Strain Compensation Model that workers with access to appropriate job resources can remain healthy and motivated in the face of high job demands when they have access to appropriate job resources. Previous studies have often failed to find the theoretically and practically appealing moderating effect of job resources. This study builds on previous research by explicitly matching types of demands with types of resources in the expectation that this will increase the likelihood of observing the interactive effect of job demands and resources. 348 adult workers representing a wide variety of occupations completed measures of cognitive and emotional demands and resources on the one hand and measures of strain related outcomes (burnout, depression, social dysfunction, worry, and desire to discontinue work) one

the other hand. Hierarchical regression analysis revealed that (a) cognitive resources significantly moderates the relation between cognitive demands and the desire to discontinue work, and (b) emotional resources significantly moderates the relation between emotional demands and social dysfunction. Results indicate that access to appropriate resources enable workers to remain motivated and socially healthy in the face of high job demands. The findings show that optimal combinations of matched job demands and job resources can counteract the negative effects of job stress. In accord with predictions of the DISC Model, appropriate job resources have the potential to moderate the negative effects of job demands on workers motivation and social functioning. The findings provide support for the proposition that high job demands do not necessarily lead to negative outcomes. Indeed when resources match demands, positive outcomes may be observed in the face of high demands.

Keywords: *job demands, burnout, social dysfunction, Demands Induced Strain Compensation Model, job resources*

Positive psychology at work: Strengths-based approaches to performance enhancement

Chair(s): GORDON, S. (The University of Western Australia)

Discussant(s): VELLA-BRODRICK, D.

The purpose of this symposium is to illustrate applications of strengths-based approaches in four different performance environments. Prior to an open question and answer session, to conclude the symposium, a discussant will summarize core themes from the four presentations. The strengths philosophy championed by Donald O. Clifton, and other Gallup researchers, is the assertion that individuals are able to gain far more when they expend effort to build on their greatest talents than when they spend a comparable amount of time and effort to remediate their weaknesses (Clifton & Harter, 2003). In addition to Clifton's pioneering studies on strengths, strengths approaches can be traced back over 60 years to the management literature of Haldane (1947) and Drucker (1967). However, with the advent of positive psychology only recently have thought leaders in business, education and sport shifted from deficit- and problem-focused models to abundance- and solution-focused approaches towards individual performance enhancement and organizational development. Linley (2008) defines a strength as 'a pre-existing capacity for a particular way of behaving, thinking, or feeling that is authentic and energizing to the user, and enables optimal functioning, development and performance' (p. 9), while Rath (2007) believes strengths are composed of skills, knowledge and talents. The typical process of strengths development begins with identification, moves into integration, and ultimately to changed behaviors and outcomes (Clifton & Harter, 2003). Subsequently, in this symposium each presenter will describe how they developed strengths, specifically in sport, dance, military, medical and educational settings, by first identifying strengths, then integrating a focus on strengths into the respective working cultures,

and, finally, how they monitored changes in behaviors and outcomes. In summary, the key learning objectives of this symposium include: a brief history on strengths and strengths-finding approaches; how strengths-based approaches map onto applied positive (coaching) psychology; how to both identify and integrate strengths in the workplace; how to determine outcome measures of behavioral change as a consequence of strengths-based management.

Strengths-based coaching of mental toughness in sport: Case study of a professional cricket team

GORDON, S. (The University of Western Australia)

Illustrated in this presentation is a strengths-based approach to developing mental toughness among individual professional cricketers and an entire cricket team. The Cricket Mental Toughness Inventory (CMTI; Gucciardi & Gordon, 2009) and the Center for Applied Positive Psychology (CAPP) Realise2 Model (Linley, 2008) were employed to examine changes in mental toughness over an entire season of play (October 2009 – March 2010). Individual dispositional leadership was also determined using Hogan Assessment Systems (Hogan & Hogan, 2007). The initial 24-item version of the CMTI is comprised of six factors - *Affective intelligence*; *Desire to achieve*; *Resilience*; *Attentional control*; *Self-belief*; and *Cricket Smarts*. It was administered pre- and post-season to all members ($n=28$) of an Australian State cricket squad. The CAPP Realise2 Model proposes four means of "making weaknesses irrelevant": *Role shaping* – defining roles around a person's strengths, rather than trying to define the person around roles; *Complementary partnering* – working with someone who compensates for an individual's weaknesses; *Strengths-based team work* – similar to complementary partnering but chunks up a level and applies the approach to the 'team' rather than to individuals; and *Training* – used when roles cannot be crafted differently or there is no one with whom one can partner or there is no wider team to share the burden. Pre-season CMTI and Hogan data did not discriminate either mental toughness or leadership capacity among players so both leaders and their respective leadership groups

were determined by cricket-specific criteria. A hybrid strengths-finding exercise facilitated *role shaping*, and positively impacted senior players in particular. Making weaknesses irrelevant using *complementary partnering*, *strengths-based team work* and *training* were also well received and preliminary interview data indicate that changes in mental toughness are occurring. Post-season CMTI data, including multi-source and interview responses, will be collected February-March 2010. Professional athletes indicated overwhelming support for the present strengths-based approach to building mental toughness. Preliminary qualitative and quantitative findings indicate that the most positive changes appear more evident among senior players. Use of multi-source CMTI data and Hogan reports and how these were integrated within the strengths approach will be discussed.

Keywords: *strengths-based coaching, mental toughness, sport, case study, professional cricket team*

The art of the positive pas de deux: Putting positive psychology into dance!

MOYLE, G. (Queensland University of Technology)

Performance psychology has more recently included a focus on applied practice within the performing arts, and specifically the dance industry. Whilst the use of psychology within this field has been occurring for a number of years, it has primarily taken its cues from the area of sport psychology or clinical psychology when dealing with 'problems' (e.g. eating disorders). What has been evident with the more recent introduction of positive psychology concepts with this population is the observed responsiveness from dancers towards a strengths-based approach. The aim of the inclusion of these frameworks has been to assist in increasing the empowerment, personal responsibility and effectiveness of the dancers' psychological preparation and skills in the area of performance – whether on stage or off. A positive psychology and strengths-based approach has been incorporated with both dancers-in-training and lecturers as part of a University dance degree program. Performance Psychology is taught into a range of subjects across Orientation Week,

Integrated Professional Skills (pre-Semester preparation), Mid-Semester, and Professional Skills. Within the past 5 out of 8 years involvement in the teaching of Performance Psychology to First, Second and Third year dance students within a University dance program, the shift towards the application of positive psychology principles has warranted an observed trend in the uptake of psychological learning and educational strategies regarding effective application of techniques resulting in attitudinal shifts regarding approaches to both performance in their dance studies and career, as well as life in general. This has been observed through self-report assessment pieces outlining personal learning and effective application, in addition to actual observed performance progress and success. The inclusion and integration of positive psychology and strengths-based framework into the delivery of content of subjects within a University dance program have been observed to have helpful outcomes at both the performance, academic and personal levels for students. The shift of focus towards the positive psychology approach is therefore believed to be of high importance in its ability to positively impact upon the application of performance psychology strategies and general psychological principles within the unique area that is dance.

Keywords: *positive psychology, dance, eating disorders, performance, strengths-based approach*

Strengths profiling using the revised performance profile technique: A case study approach

GUCCIARDI, D. (University of Queensland),
TEMBY, P. (Defence Science and technology Organisation)

Unlike traditional psychometric assessments that impose desirable constructs on an individual (e.g., questionnaires), the performance profiling technique (Butler, 1991; Gucciardi & Gordon, 2009) engages an individual in a more active role in the decision-making process. Stemming from a personal construct psychology (Kelly, 1955/1991) framework, which emphasises the importance of understanding the ways in which individuals perceive the world, the performance profile

encourages researchers and practitioners to regard an individual's perception or meaning of his or her performance as an essential source of information for identifying and understanding strengths as well as areas requiring development. Previously the application of this technique has been limited to sport settings. However, the purpose of this presentation is to explore the technique's applicability in two unique performance settings, namely the military and surgery. A case-study approach was employed to explore a military officer's and medical surgeon's perceptions of the characteristics and skills required for excellence in their performance setting. Each interview was guided by the processes outlined in the revised performance profile technique (Gucciardi & Gordon, 2009), and audio recorded and transcribed verbatim. In addition to the elicitation of bipolar constructs in rank order of importance and self-assessments (e.g., self-belief vs. self-doubt), information on situations or events when the constructs are considered useful (e.g., testing out a new surgical procedure) and an understanding of the application of each construct in such situations was generated (e.g., knowing that you've done the training and practice [self-belief]). Quantitative and qualitative data pertaining to each of these issues is described to better understand each participant's individual strengths and their performance domain. Both qualitative and quantitative data relating to an individual's strengths can be generated using the revised performance profile technique. Quantitative data provides a benchmark for temporal or intervention assessments whereas qualitative information provides an understanding of the application of certain strengths as well as methods for enhancing their maintenance. It is our hope that the current research will stimulate applications of the technique in other performance settings beyond the sporting context.

Keywords: performance profile technique, decision making process, sport, case study, military

Strengths in education: Leveraging strengths to create flourishing students, teachers and schools

GREEN, S. (Positive Psychology Institute)

The development of the Values in Action Inventory of Strengths (VIA-IS), a character strengths assessment (Peterson & Seligman, 2004), has supported and driven the positive psychology movement. Over one million people have now taken the assessment on-line (VIA Intensives, Sydney, 2009). Recently, a focus on strengths has occurred within the educational sector in Australia. Within an educational setting, strengths identification and use can be explored in the classroom for the optimal functioning of both students and teachers; within the curriculum where there is a growing discussion on how to embed strengths based approaches; and at a whole-school level where a focus on strengths can assist in the development of a "flourishing school". This presentation will provide an overview of both the research and practice on strengths-based approaches in education occurring in Australia and globally. Specific case studies will be utilised to illustrate how a scientist-practitioner approach to strengths-based development in education can be taken. In a growing number of schools, both teachers and students are assessing strengths. The VIA-IS is utilised to identify an individual's top 5 "signature strengths". The assessment can be taken free on-line (www.viacharacter.org). The accompanying handbook, "Character Strengths and Virtues: A Handbook and Classification" can be utilized to learn more about each character strength. Data from a pilot study using VIA-IS with year 5 students in a Sydney school and from two programs delivered to Sydney school teachers will be presented. Results support previous research findings that the identification and use of "signature strengths" in novel ways can positively affect well-being. Playing to an individual's character strengths enhances well-being because they are able to do what they naturally do best, and thus generate feelings of autonomy, confidence, and self-esteem (Linley & Harrington, 2006). In using the Values in Action survey, both teachers and students are provided with a useful vocabulary to both identify and talk about their own character strengths. Whilst research support is still accumulating, there have been enough outcome studies conducted to conclude that

strengths-based approaches are extremely promising.

Keywords: *Values in Action Inventory of Strengths, character strengths, positive psychology, educational sector, well-being*

Practitioner health and professional practice: Interactions and interventions

Chair(s): ALDER, J. (Private Practice)

In early 2007 the Australian Psychological Society commenced a process of exploring the relationship between the health issues of psychologists and their professional practice. The reports of the California Psychological Society's Collegial Assistance Program have been informative in indicating the nature and extent of the need and related services in the United States. Published research on the health and stress of Australian psychologists is scarcer. Examples of unpublished Australian research have been identified and are presented in this symposium. The design and provision of support services for psychologists with health issues, that can affect their professional practice, is developing on various fronts. Self-help care guides, peer support groups and complaints management are some approaches identified by presenters. Presenters will outline the rationales, practices and reviews being undertaken by a state registration board, the new Psychologists Board of Australia and the major professional society to encourage healthy behaviours, health monitoring and health recovery of psychologists with health issues. The key learning objectives are: 1) to illustrate approaches and outcomes of Australian research on the health issues of psychologists and its relation to their professional practice; 2) to identify principles and processes developed by psychologist registration/regulatory bodies to manage to identification, monitoring and rehabilitation of impaired psychologists; 3) to indicate alternate approaches to assisting health professionals manage and recovery their health.

Associations among therapist beliefs, personal resources and burnout in clinical psychologists

WADE, T. (Flinders University)

This research investigates the relationship of therapy-related beliefs and self-care to work stress. A survey was conducted of 190 South Australian Clinical Psychologists in terms of demographics, workplace variables, burnout, beliefs about conducting therapy, and personal resources. A modified version of the Therapist Belief Scale was used and a factor analysis reveals four factors with themes of therapy-related beliefs about distress, therapeutic models, responsibility, and control and understanding. Unhelpful beliefs are found to be as important as work factors and demographics in predicting work stress. Only partial support is found for self-care to moderate the relationship between unhelpful beliefs and work stress. Multivariate analyses were conducted and identified a number of factors linked to practitioner stress and burnout. These will be discussed and strategies for working with therapist beliefs and personal resources in supervision will be explored.

Keywords: beliefs, clinical psychologists, personal resources, burnout, distress

The experience of depression amongst Australian psychologists

MOORE, B. (Private Practice), LAWRENCE, D. (Private Practice)

This paper reports on the findings of a qualitative study into the personal experiences of depression amongst a sample of Australian psychologists. The study explores four domains of data (i) The inner experience of the illness for practicing psychologists i.e. the personal experience of depression and intervention practices, (ii) the professional self and the impact of the illness on practice and treatment approaches, (iii) relational responses to the illness, decisions about disclosure and experiences of stigma, and, (iv) the frameworks used by participants to give meaning to their experience of depressive illness. Themes of silence, pain, harm, identity, meaning and engagement are found to be woven throughout these narratives.

Keywords: depression, psychologists, interventions, treatment approaches, stigma

Managing an impaired psychologist - a supportive approach to protecting the public

FRANKCOM, K. (Psychologists Registration Board of Victoria)

The Psychologists Registration Board of Victoria (PRBV) in implementing the legislative requirements to investigating a notification about an impaired psychologist has attempted to support the psychologist experiencing health impairment whilst ensuring the public is protected. The theoretical principles that are drawn upon in Board deliberations include "therapeutic jurisprudence". The PRVB has actively promoted ill health prevention with its resource kit which is available on line: "Health Matters for Psychologists". In recent developments, the Health Practitioner Regulation National Law Act 2009 which will be the basis for the regulation of all health practitioners from July 1 2010 has enshrined the mandatory notification by health practitioners of other health practitioners where there are issues of the practitioner being impaired. Implications under this new regulatory requirement will be discussed.

Keywords: Psychologists Registration Board of Victoria, psychologists, health impairment, therapeutic jurisprudence

Well-Being: Prevention and self care for the empowered psychologist

BEV ERNEST, B. (Australian Psychological Society)

In 1994 The California Psychological Association (CPA) formed the Colleague Assistance and Support Program (CLASP) Task Force to investigate California Psychologist's vulnerabilities to wellbeing, barriers to seeking out support, and their perceptions between how they perceive themselves compared to their colleagues' level of health and/or impairment. Since that time CPA has turned the Task Force into an on-going Committee which I have chaired since 2005 and currently Co-Chair with Diane Bridgeman, Ph.D., Chair of the American Psychological Association Advisory Committee to Colleagues Assistance (APA ACCA). The Mission of CPA CLASP is to: Provide preventive resources that will support

us as psychologists in maintaining and enhancing our general health and mental well-being throughout the developmental spectrum of our personal and professional lives; destigmatize help seeking and health seeking behaviors and interventions; endeavor to reduce the occurrence, frequency, and severity of distress and/or impairment of California psychologists through prevention, education, early identification, and referral; and to encourage collegial understanding, support, and referral for California psychologists who are experiencing distress and/or impairment. We are currently analyzing the data of a nation survey we conducted in collaboration with the APA ACCA. Our Survey investigated: (1) the needs, preventive/practices/interventions, and obstacles psychologists engage in to address issues of stress – distress; (2) Protective factors and risk factors; and 3) Barriers to seeking help. I will report on these findings as well as discuss the current mission, programs, obstacles, and vision of CPA CLASP.

Keywords: well-being, prevention, self-care, psychologists, help-seeking

Predicting and promoting emotional health in patient groups with chronic health conditions

Chair(s): RICCIARDELLI, L. (Deakin University)

The physical and emotional demands of a chronic illness present many challenges for the individual. Among these include the risk of developing and managing high levels of depression and anxiety. As these symptoms significantly reduce individuals' quality of life, it is important that special attention is paid to better understand and manage emotional health. The present symposium is designed to further our understanding of the nature and the impact of the emotional health experienced by individuals with chronic health conditions in four different contexts. In addition, the symposium examines ways of managing and ameliorating emotional health, with an emphasis on interventions that focus on self-care and self-help. The first paper examines the disease-related psychosocial concerns of youths with Type 1 diabetes living in rural areas, and the relationships between diabetes self care, metabolic control, emotional health, quality of life and the availability of social support. Two of the main predictors of poor self-care were high negative affect and low levels of social support. The second paper examines the psychological characteristics of women diagnosed with breast cancer that are associated with adherence and affective responses, which reduce the risk of developing Lymphoedema. These include self-efficacy and self-regulatory ability to manage stress associated with Lymphoedema risk. The third paper examines the efficacy of the Expressive Writing paradigm as a self-help intervention to reduce post-traumatic stress symptoms among cancer patients and community volunteers. This involved investigating whether writing about one's stressful experiences is more or less beneficial for individuals who are experiencing stress reactions compared to non-stressed individuals.

Support was found for the effectiveness of this intervention. The fourth paper examines the efficacy of a Motivational Interview Health Coaching intervention and the effects of increasing physical exercise for individuals with a chronic illness. There was no evidence that this intervention was effective. However, individuals who chose to increase exercise showed a reduction in their anxiety levels. The implications of the findings for clinical practice will be outlined by the discussant.

Predictors of self care among youth with Type 1 diabetes from rural and urban Victoria

HACKWORTH, N. (Parenting Research Centre, Melbourne)

Adolescents with Type 1 diabetes (T1D) have considerable physical and emotional demands placed on them by their illness, especially in the context of negotiating adolescent development and the pathway to independent self care. Research suggests this places them at significant risk of developing mental health problems particularly when they are isolated from services. The aims of this study were to document the disease-related psychosocial concerns of youths with T1D from rural areas and to assess the impact of rural location on the relationships between diabetes self care, metabolic control, negative emotions, quality of life and the availability of social support. 123 youths with T1D (73 rural dwellers, 50 urban dwellers), between the ages of 13 and 25, completed a questionnaire assessing diabetes self care, self efficacy, negative affect, quality of life, perceived social support and risk taking behaviour. Twenty-two of the rural adolescents participated in online focus groups and one parent of each completed a telephone interview. No significant rural/urban differences were observed on any of the variables. Both urban and rural youths with T1D were at heightened risk of adverse mental health outcomes, particularly anxiety, and this risk increased with age. Predictors of poor self care were increased negative affect and risk taking; and lower levels of community engagement, social support and self efficacy. Self care, with urban dwelling predicted improved metabolic control. Rural adolescents

and their parents reported a sense of geographical and social isolation, worry about life-threatening health complications, fatigue and concern about parent/adolescent interactions. The findings support the need for an affordable and accessible adolescent/parenting mental health program to prevent depression and anxiety and promote positive self care behaviours in young people with T1D.

Keywords: adolescents, type 1 diabetes, mental health problems, quality of life, social support

Psychological profiles of women diagnosed with breast cancer regarding adherence to Lymphoedema risk minimization behaviours

KANGAS, M. (Macquarie University), KOELMEYER, L. (Westmead Breast Cancer Institute)

Lymphoedema, a chronic condition causing physical and psychological impairment, may develop following treatment for breast cancer. Guidelines for Lymphoedema risk management recommend lifetime adoption of simple behavioural measures, such as minimizing trauma to the affected arm. The aim of this study was to identify psychological characteristics of women at the time of breast cancer diagnosis ($N=106$) that are associated with adherence and affective responses to Lymphoedema risk at three months post-diagnosis. Assessments of psychological factors including perceived consequences of Lymphoedema, self efficacy to manage Lymphoedema risk, self-regulatory ability to manage stress associated with Lymphoedema risk and perceived Lymphoedema risk were conducted at the time of breast cancer diagnosis. Outcome measures including Lymphoedema knowledge, adherence to risk minimization recommendations and Lymphoedema-related distress were assessed three months later following surgery. K-means cluster analysis was initially conducted to characterize the sample into three distinct cluster cognitive profiles according to the psychological factors assessed at the time of diagnosis. Using the GLM procedure, levels of adherence to recommended Lymphoedema risk reduction behaviours, and Lymphoedema specific distress, were found to differ between

clusters. No differences between clusters were evident for perceived Lymphoedema risk and knowledge. Cluster 1, characterized by women believing that there are few negative consequences of Lymphoedema, having low self efficacy and low self-regulatory ability were found to have lower adherence and less distress than individuals in Clusters 2 and 3 exhibiting higher levels of self-efficacy, greater perceived negative consequences and higher self-regulatory ability. These findings demonstrate that specific patterns of psychological factors underlie adherence to risk management recommendations. Since lifetime enactment of these risk minimizing behaviours is recommended, these findings highlight the need for interventions to address self-efficacy and specific beliefs held by women with breast cancer that may be a barrier to ongoing adherence.

Keywords: *Lymphoedema, breast cancer, distress, self-efficacy, risk minimization*

Can journal writing enhance well-being in stressed populations? An investigation of the expressive writing paradigm as a potential self-help intervention for stressed cancer patients

KANGA, M. (Macquarie University), MILROSS, C. (Royal Prince Alfred Hospital)

The Expressive Writing (EW) paradigm has been found to be helpful in improving well-being in various populations, (most commonly in university samples). However, inconsistent findings have been documented for samples with elevated posttraumatic stress symptoms (PTSS) including individuals diagnosed with a potentially life-threatening medical condition (such as cancer). Hence, the verdict is still out as to whether the EW paradigm is beneficial for individuals suffering from elevated trauma symptoms. Accordingly, the aim of this study was to investigate whether writing about one's stressful experiences is more (or less) beneficial for individuals who were experiencing heightened stress reactions compared to non-stressed individuals within 2 distinct adult samples; recently treated cancer patients and community volunteers. Participants were administered questionnaires that assessed posttraumatic stress, appraisals,

and somatic symptoms. Individuals were randomly allocated to one of two writing interventions focusing on; (i) stressful events (EW group) or (ii) non-stressful events (C group), over 4-consecutive weekly, 20 minute sessions. Participants were re-assessed at 1- and 6-months follow-up (FU). Complete data has been obtained for 68 community and 39 cancer participants (this study-arm is in progress). At baseline, one-third of the community (35%; $n=24$) and cancer (31%; $n=12$) participants had moderate-to-severe PTSS (assessed by the PDS). At 6-months follow-up, stressed individuals in the EW intervention were found to have a significant decline in PTSS in both the cancer and community sub-samples relative to non-stressed individuals in the EW condition as well as stressed and non-stressed individuals in the control writing conditions ($p < .05$). Stressed individuals in the EW conditions also reported a decrease in somatic symptoms at 6 months FU. In addition, stressed community participants in the EW condition were found to have a significant decrease in negative self appraisals relative to non-stressed community participants ($p < .05$). The results will be discussed in context of the potential utility of the EW paradigm in improving well-being in stressed health and community populations.

Keywords: *expressive writing, post-traumatic stress disorder, stress reactions, health, journal writing*

Can a behavioural intervention reduce depression or anxiety in those with a chronic illness?

DI BENEDETTO, M. (University of Ballarat)

The aim of the current study was to determine if a Motivational Interview Health Coaching intervention could improve mental health status, increase healthy behaviours and coping. Behaviour change, depression, anxiety, coping, resilience, and health factors were compared in participants allocated to either the treatment group who received the intervention, or the active control group. The intervention consisted of up to three face-to-face individual motivational interview health coaching sessions. These sessions incorporated health promotion and evidence-based

behaviour change techniques, such as motivational interviewing, decisional balancing, solution-focused counseling, and goal setting, within a coaching context. Contrary to expectation those in the control group experienced a reduction in anxiety and an increase in coping resources. Current findings did not provide evidence for the effective reduction in depression, anxiety or significant health outcomes as a result of the behavioural intervention. Participants who chose to increase physical exercise experienced a reduction in anxiety compared to those that did not increase physical exercise. These results suggest that the significant reduction in anxiety experienced by the control group may have been due to the benefits of increased physical exercise. The study indicates that health information and self-monitoring, for those willing to make a health behaviour change, may be a sufficient strategy and needs further investigation. The study provides further support for the anxiolytic effect of physical exercise.

Keywords: motivational interview health coaching intervention, mental health, coping, resilience, depression

Prediction of well-being for college students in the USA: Cross-cultural validity of different theoretical perspectives

Chair(s): SHEU, H. B (Arizona State University)

Discussant(s): SHEU, H. B. (Arizona State University)

The purpose of the symposium is to introduce the current status of the well-being literature and the findings of a research program conducted in the United States. The symposium consists of four individual presentations – a brief review of the psychological literature on well-being followed by three empirical studies. The first presentation will provide an overview of how well-being has been conceptualized and the two theoretical perspectives developed to predict well-being outcomes. A rationale for the subsequent three empirical studies will also be highlighted. The first and the second empirical studies are designed to test the effectiveness of two theoretical models, Ryan and Deci's (2001) Self-Determination Theory and Lent's (2004) social cognitive perspective, in predicting the well-being of American college students under normal life conditions. Additionally, we will test the applicability of the two models to students with different racial backgrounds. The third empirical study focuses on a different population – international students in the U.S. Specifically, this study explores how social cognitive constructs can be utilized to forecast international students' acculturative stress and well-being. Together, the four presentations will provide the audience with knowledge about the progress that has been made in the well-being literature in the U.S. and the utility of different models in explaining the well-being of students from different racial/cultural groups. Implications for cross-cultural counseling practice and directions for future research will be discussed. The learning objectives of this symposium are: (1) Participants of the symposium will acquire knowledge about the

current status of the well-being literature in the U.S. (2) Participants will gain understanding of the key concepts of Self-Determination Theory and how the concepts could be used to improve the well-being of American college students. (3) Participants will become familiar with empirical findings derived from the social cognitive perspective and how to apply these findings to increase students' well-being. (4) Participants will gain knowledge about acculturative stress that international students may experience and the relevance of social cognitive constructs to help them overcome acculturative stress and restore their well-being. (5) Participants will familiarize themselves with knowledge about the effectiveness and cross-cultural validity of different theories proposed to explain and predict well-being.

The current status of the well-being literature in the United States

SHEU, H. B (Arizona State University)

The purpose of this presentation is two-fold: (a) provide a brief overview of the psychological literature on well-being in the U.S., and (b) offer the rationale for the three empirical studies included in this symposium. In recent years there has been a shift in psychology toward reviving the study of happiness and optimal human functioning (Seligman & Csikszentmihalyi, 2000). The increasing number of studies conducted in the area reflects this trend. Well-being has been conceptualized from different philosophical perspectives. For example, the eudaimonic approach defines well-being as personal growth, purpose, and meaning in life, whereas the hedonic approach views well-being as synonymous with feeling good or happiness (Ryan & Deci, 2001). Different models have been proposed to operationalize these two perspectives. As an example of the eudaimonic approach, Ryff's (1989) model of psychological well-being (PWB) emphasizes different aspects of positive functioning, such as self-acceptance, autonomy, and personal growth. On the other hand, typifying the hedonic approach, Diener's (1984) tripartite model of subjective well-being (SWB) focuses on life satisfaction, the presence of positive affect, and the absence of negative affect. Research

has shown that indicators of PWB and SWB might represent distinct but related latent dimensions (McGregor & Little, 1998). In addition to defining well-being, different theories have also been proposed to explain and predict this important construct. Deci and Ryan (2001) applied the concepts derived from Self-Determination Theory to predict a variety of well-being indicators, and argued that satisfaction of three basic psychological needs is essential in achieving well-being. Based on Bandura's social cognitive theory, Lent (2004) put together two unifying models to explain how individuals achieve and restore life satisfaction under normal and challenging life conditions (normative vs. restorative models). In Lent's models, social cognitive variables (i.e., self-efficacy, outcome expectations, goal progress) play the key mediational roles. The review of the well-being literature in the U.S. indicates the need to test the effectiveness of different theoretical models in predicting various well-being outcomes. Also, the applicability of these models to different racial/cultural groups in the U.S. remains uncertain. The following three presentations represent an empirical effort to answer these questions.

Keywords: well-being, life satisfaction, social cognitive theory

Using Self-Determination Theory (SDT) to predict well-being of college students with different racial backgrounds

SHEU, H. B (Arizona State University)

The current study was designed to test the cross-cultural applicability of Self-Determination Theory (SDT; Ryan & Deci, 2000). Specifically, SDT posits three basic psychological needs – autonomy, competence, and relatedness – and hypothesizes that fulfillment of these needs would promote psychological growth and well-being. Ryan and Deci and their colleagues have conducted a number of studies and have found support for their claims (e.g., Deci et. al., 2001; Ryan et. al., 2008). However, the effectiveness of three basic psychological needs in predicting well-being has not been tested in a comprehensive model that integrates other predictors, nor has SDT been used to explain well-being of

individuals with racial/ethnic backgrounds. Findings of the study will help to fill in these gaps with a diverse U.S. college student sample. A sample of 752 college students (47% males, 53% females), whose mean age was 20.6 years with a *SD* of 3.84 years, from a large Southwest university in the U.S. responded to a survey developed to measure predictors (e.g., personality, academic support), mediators (i.e., satisfaction of three basic psychological needs), and indicators (e.g., academic satisfaction, global satisfaction, self-esteem) of well-being. The sample self-identified as Caucasian (55%), Latino-American (15%), Asian-American (9%), African-American (7%) and individuals with other backgrounds (14%). Preliminary findings indicate that personality and academic support were associated with satisfaction of three basic psychological needs (*rs* ranged from .24 to .41, *ps* < .01), while the three basic psychological needs were also highly correlated with each other (*rs* ranged from .45 to .57, *ps* < .01). Moreover, three basic psychological needs were related to academic satisfaction (*rs* ranged from .35 to .57, *ps* < .01) and life satisfaction (*rs* ranged from .30 to .39, *ps* < .01). Preliminary findings of the study suggest the possibility that satisfaction of three basic psychological needs may mediate the relation of personality and academic support to well-being outcomes. Structural equation modeling (SEM) techniques will be implemented to directly test this mediational model for White American, Latino/a American, and Asian American samples. Complete results and cross-cultural validity of SDT will be presented and discussed at the symposium.

Keywords: Self Determination Theory, cross-cultural, college students, well-being, personality

Predicting American college students' well-being from a social cognitive perspective: Cross-cultural comparisons

MEJIA, A. (Arizona State University)

Based on Bandura's social cognitive theory, Lent (2004) proposed a unifying framework to explain how individuals achieve and maintain their well-being under normal life conditions. In Lent's normative well-being model, social cognitive constructs (e.g., self-efficacy,

outcome expectations, goal progress) are integrated with personality and environmental variables in predicting life satisfaction. Specifically, social cognitive variables are hypothesized to be the mediators in the relation of personality and environmental predictors to well-being outcomes. Given that White Americans have been the center of empirical attention in the well-being literature, the current study is designed to apply Lent's normative model to college students with different racial backgrounds in the U.S. This design allows us to directly test the cross-cultural validity of this particular well-being model. Given the salience of academic performance in college students' lives, most variables included in this study were contextualized in the academic domain. The data were collected from 752 college students at a large Southwest university in the U.S. (the same sample of participants also responded to a different set of instruments included in Presentation 2). Participants completed a battery of measures that were designed to assess personality and academic supports, social cognitive variables (i.e., self-efficacy, outcome expectations, and goal progress), and well-being outcomes (i.e., academic satisfaction, global satisfaction, psychological well-being). Specifically, social cognitive variables are hypothesized to be the mediators in the relations of personality and academic support to well-being outcomes. Findings from preliminary analyses showed that social cognitive variables were correlated with well-being outcomes (*rs* ranged from .20 to .51, *ps* < .01) and personality and academic supports (*rs* ranged from .14 to .36, *ps* < .01). Also, personality and academic supports were associated with well-being outcomes (*rs* ranged from .22 to .46, *ps* < .01). Results of the study offered initial support for testing social cognitive variables as mediators in the relations of personality and academic supports to well-being. The full model outlined by Lent (2004) will be tested using multi-group SEM across White American, Asian American, and Latino/a samples. Implications for cross-cultural counseling practice and research will be discussed in the presentation.

Keywords: *social cognitive theory, well-being, personality, life satisfaction, cross-cultural validity*

Predictors of international graduate students' well-being: A restorative model analysis

RIGALI-OILER, M. (Arizona State University)

The well-being literatures in the U.S. have focused mostly on variables associated with achieving and maintaining satisfaction under normal life circumstances. To fill in this gap, Lent (2004) proposed a model of restorative well-being that put together social cognitive, environmental, and personality variables to explain how individuals reinstate their satisfaction under stressful conditions. Using the restorative well-being model, the presentation will introduce findings derived from a sample of international students in the U.S. It has been argued that international students, as they transition from one culture to another, often experience acculturative stress (e.g., Chavajay & Skowronek, 2008). The variables outlined in Lent's (2004) model will be used to predict the relationship between acculturative stress and well-being, and explain how international students restore their satisfaction in the cultural transition process. Based on Lent's (2004) model, an on-line survey was designed to assess life satisfaction and acculturative stress as well as their predictors, such as coping strategies, coping efficacy, environmental support, and personality variables. Except personality and life satisfaction, all other variables are contextualized in the academic arena as it is the primary life domain for international students. At the time of this proposal (June 2009), 61 students from a large Southwestern University have completed the survey, and data collection will continue into Fall 2009 and Spring 2010 until the desirable sample size is reached. The majority of participants came from Indian (55%), followed by China (17%), Taiwan (8%), and other Asian countries. At the time of the proposal, preliminary findings indicate that acculturative stress was negatively related to life satisfaction ($r = -.27, p < .05$). Academic support and coping efficacy were correlated with well-being outcomes

($|rs| = .26$ to $.68, p < .05$). Moreover, personality (i.e., emotional stability) was related to well-being ($|rs| = .13$ to $.37$). Preliminary findings suggest that coping efficacy and academic supports are likely to mediate the relations of personality to well-being outcomes (e.g., acculturative stress, satisfaction) for international students. The restorative model will be tested using SEM techniques. Directions for future research and clinical implications for cultural adjustment will be highlighted.

Keywords: *well-being, restorative well-being, life satisfaction, international students, cultural transition*

Prejudice and racism: What can psychology do?

Chair(s): AUGOUSTINOS, M. (University of Adelaide)

Discussant(s): SONN, C. (Victoria University)

It is now over ten years since the APS published the Position Paper on prejudice and racism (1998). This symposium reflects upon the impact of this paper on the discipline, the profession, and the wider society. Following the recommendations of the paper in the intervening years various intervention programs have been developed and introduced to combat prejudice and racism on several levels. The speakers in this symposium will discuss the development and introduction of recent new initiatives in the spirit of the position paper including: the Boatshed Declaration on Racism, the New Arrivals Program for refugee children in South Australian schools and the Treaty movement in New Zealand. The symposium will also consider the psychological impact and significance of the recent apology to the Stolen Generations. Key learning objectives include: the history and role of psychology in the colonising project in Australia and New Zealand, psychology's role in the oppression and marginalisation of Indigenous peoples, what psychology can do to encourage and promote reconciliation between Indigenous and non-Indigenous people; and how psychological knowledge can be used to inform social policy and significant public debates.

Australian psychology and racism: The Boatshed Declaration

DUDGEON, P. (University of Western Australia)

In June 2009, over 40 leading researchers and academics from across Australia met at the University of Western Australia Boatshed in Perth, to discuss research concerning racism towards Aboriginal and Torres Strait Islander Australians. The Australian Psychological Society, the Australian Indigenous Psychologists Association, the Australian

Human Rights Commission, the Telethon Institute of Child Health Research, the Australian Indigenous Doctors Association, University of Notre Dame and the University of Western Australia hosted the gathering. This paper will present the Boatshed Declaration and the major conclusions from the gathering and discuss the implications of these in the profession of Australian psychology. The two-day meeting culminated in the production of a detailed statement against racism. It was also deemed timely to consider anti-racism strategies and make recommendations to government. The three key points that emerged were 1) that racism against Aboriginal and Torres Strait Islander peoples exists in Australia today, 2) that racism has a destructive impact on Aboriginal and Torres Strait Islander people's education, health and wellbeing, well beyond its immediate impact, and 3) that racism works against all agendas which aim to close the gap in health and other outcomes between Aboriginal and Torres Strait Islander peoples and other Australians. A particular strength of the gathering was that the initiative was developed from a spirit of reconciliation by Indigenous professionals. The considerable presence of Indigenous psychologists and academics who provided valuable contributions made this a unique event. The need to address racism towards Indigenous Australians and other minority groups remains an important and appropriate undertaking for the discipline at individual and organisational levels. There are also implications for teaching, research and professional development.

Keywords: *Indigenous Australians, racism, well-being, reconciliation*

The psychology of decolonisation: How may a coloniser contribute to decolonising change?

HUYGENS, I. (University of Waikato)

In advocating and theorising decolonisation, writers have largely focused on processes undertaken by the colonised and oppressed (Freire, 1975; Smith, 1999) rather than those undertaken by the coloniser. Although coloniser groups are often called upon to theorise their own processes of change

(Kessar, 2006), such responses are seldom found in psychological writing. Social movements, on the other hand, have targeted the dominant Anglophone group in former British colonies such as Ireland, South Africa, Australia and New Zealand, and have developed ideological and psychological interventions for change. So how may the work of social movements help to theorise the contribution of the coloniser to decolonisation work? This paper presents findings of two studies undertaken recently with Pakeha in the anti-racism and Treaty movement in Aotearoa New Zealand. Responding to requests from indigenous Maori, the Treaty educational movement has worked in community and organisational settings with the dominant Pakeha settler group to 'honour the Treaty' for harmonious settlement. Key interventions used by Treaty educators are (i) revisiting colonial history from an indigenous standpoint (ii) encouraging a sense of collective responsibility for dominant cultural/institutional forms and (iii) encouraging collective action by Pakeha in mutual agreement with Maori groups. Using a participatory action approach, fifty educators were invited to articulate theory about how they themselves and their target groups change. To provide evidence of the effect of such interventions, sixteen organisations were invited to recount their experiences of Treaty-focused change over 20 years. Their accounts were analysed using a critical discursive approach.

Keywords: *colonisation, oppression, Treaty movement, racism*

Acknowledging injustice: Redefinition of (and resistance to) the past in explaining social problems

HASTIE, B. (University of South Australia)

One of the key recommendations of the APS's position paper on racism was that governments publicly acknowledge racism. Such an acknowledgment was recently evident in the Australian government's apology to Indigenous peoples for past mistreatment, particularly the forced removal of Indigenous children (the 'Stolen Generations'). This paper examines both the government's apology and

the reply speech offered by the main opposition political party. As with similar events, the apology allowed for redefinitions of the past, which suggested particular solutions to current social problems. Prime Minister Rudd's apology acknowledged Indigenous people's mistreatment and linked this to current Indigenous disadvantage. In contrast, Opposition Leader Nelson's reply speech minimised Indigenous suffering and argued that this was not connected to current disadvantage. Hence, even when discriminatory past behaviour by the dominant group is publicly acknowledged, this does not necessarily result in recognition of the importance of the past for current intergroup inequality.

Keywords: *racism, Indigenous, Stolen Generations, apology, intergroup inequality*

The role of banal nationalism in the perpetuation of racism in South Australian schools with New Arrivals Programmes

RIGGS, D. (Flinders University), DUE, C. (University of Adelaide)

Whilst a growing number of schools within South Australia offer programmes for students who arrive in the country either as refugees or as a part of planned migration, there is competing evidence as to the success of such programmes in promoting the inclusion of these students. Importantly, whilst schools with New Arrival Programmes (NAPs) aim to support students in learning English, this may be undermined by experiences of racism within school spaces. Ethnographic observations were undertaken of the use of playground spaces by both NAP and non-NAP students in two South Australian primary schools, as well as questionnaires administered to teachers, and focus groups held with students at both schools from across a range of classes. Ethnographic observations were coded to produce quantified data in regard to the use of space by students and the degree of integration of NAP and non-NAP students. Teacher responses were coded with a focus on perceptions of racism and degree of

integration. Focus group data was analysed thematically and is reported alongside quantitative data to give depth to the snapshot provided by the quantified ethnographic and questionnaire data. Findings suggest a considerable gap between teachers' and students' perceptions of integration of non-NAP and NAP students and the degree of racism experienced by the latter. This, it is suggested, is exacerbated by the emphasis upon English-language acquisition on the part of teachers, an emphasis that fails to understand the impact of racism upon NAP students who may experience considerable social marginalisation both in the broader community and by individuals in the school yard. The findings from this project suggest that banal nationalism (in this instance the perception by teachers that English-language acquisition is the best and correct pathway to social inclusion) may actually function to perpetuate racism against refugee or migrant children in school spaces (by failing to examine the silencing effects that arise from experiences of racism). Suggestions are made for practical approaches to challenging marginalisation in school spaces.

Keywords: social marginalisation, refugees, school, migration

Preparedness and response for disasters

Chair(s): BURKE, S. (Australian Psychological Society)

This symposium consists of 4 papers and a panel discussion on current psychological preparedness and response initiatives developed in response to the Victorian bushfires in 2009, but generalisable to other disasters. The Chair will provide an overview of the framework developed to guide the mental health response for the survivors of the Victorian bushfires (organisation of a multi-professional mental health education and training working group to build capacity in the community and mental health workforce, brief overview of 3 levels of training). The first paper discusses Australian developments in psychological first aid (MC). The second paper discusses the training for health and mental health providers (level 2 and 3), and presents an Australian adaptation of an evidence-informed package for teaching skills for psychological recovery to people affected by disasters and emergencies (DF). The third paper looks at current best practice community responses to recovery after disasters (RG). The fourth paper presents a model of psychological preparedness that has been developed to assist communities dealing with the threats of natural disaster (SM). The key learning objectives of this symposium are to understand the different needs for communities that are threatened and impacted by disasters, and to learn about best-practice models of meeting the diverse needs of affected communities.

Psychological first aid: Building community capacity following disaster and trauma

CREAMER, M. (Australian Centre for Posttraumatic Mental Health (ACPMH), University of Melbourne)

To develop and deliver simple training for community leaders (Level 1) to better equip them in assisting members of their community in recovering from the psychological effects of

the bushfires. The Level 1 training program was developed and delivered in collaboration with Beyondblue. The aim was to enhance the ability of key members of bushfire affected communities: a) to recognise when someone may be experiencing difficulty and in need of help and support; b) to provide simple advice on recovery and to assist the affected person in accessing naturally occurring support networks; and c) to assist the affected person in identifying and accessing professional assistance if required. The material drew heavily on contemporary models of psychological first aid (PFA). Resource materials were provided for trainers, as well as for community members participating in the training. Community leaders were loosely defined as anyone within a bushfire affected community who was likely to encounter survivors either by virtue of their occupation (e.g., bar staff, hairdressers, park rangers, bank tellers) or by virtue of their role within the community (e.g., football or cricket coach, town councilor, member of Rotary, Lions, etc). A “train the trainer” model was adopted, with 12 experienced mental health practitioners completing a one-day workshop. Those trainers were then equipped to provide standard (3 hour) sessions, or shorter versions if required, for community leaders across the affected region. These sessions were then offered free (funded by the Australian Government) over the months following the fires. Community leaders are in an ideal position to identify and assist disaster affected individuals over the months following impact. Building skills among this group has potential to enhance the capacity of the community to respond not only to the current incident, but also to future disasters that may impact upon their community.

Keywords: community, disasters, trauma, training, community leaders

Levels 2 and 3: Enhancing skills in health care providers to support survivors of disaster and trauma

FORBES, D. (Psychological First Aid: Building Community Capacity Following Disaster and Trauma)

To develop and deliver training for primary health and general health providers (Level 2), as well as for specialist mental health providers (Level 3), to better equip them in managing the psychological effects of the bushfires among their patients. The Level 2 resource, known as Skills for Psychological Recovery (SPR), was adapted by ACPMH from an original manual developed in the US by the National Center for PTSD and the National Child Traumatic Stress Network. SPR is an evidence informed approach comprising six specific modules for use by general health and welfare providers. It is designed to be offered in any setting and for any number of sessions from one to five. The Level 3 resource was designed by ACPMH to train mental health providers in evidence based treatments for a range of posttraumatic mental health problems. It comprises seven modules covering core cognitive behavioural interventions commonly used in various combinations to treat high prevalence conditions in the aftermath of trauma. Separate workshops and manuals were developed for adults and children/adolescents. A “train the trainer” model was adopted for Level 2, with 32 experienced mental health practitioners completing a two-day workshop. Those trainers then conducted 23 one-day workshops across Victoria over the subsequent three months, with around 300 participants being trained in SPR. Six three-day Level 3 workshops (four for practitioners working with adults and two for those working with children/adolescents) were conducted, with around 80 people attending the adult and around 40 attending the child/adolescent workshops. Workshop evaluations for both Levels of training were very positive, but log sheets completed over subsequent months showed variable use of skills learnt. Improving the skills of health and mental health providers to manage the effects of trauma is a major challenge in the aftermath of disaster. This model presents a practical approach to training large numbers of practitioners in a relatively short space of time.

Keywords: health care providers, disasters, trauma, bushfires, posttraumatic mental health problems

Community recovery from disasters

GORDON, R. (Consultant psychologist, Victorian State Emergency Recovery Plan)

To use a model of social processes initiated by disasters in communities to account for observed social phenomena and derive guidelines for managing social recovery and identifying problems in implementing them. The observation of disaster recovery in communities over twenty years forms the basis for a theory of social processes. Observations from clinical, research and participant engagement are related to impacts of threat, trauma, loss and disruption of social attachments. Subsequent pervasive psychosocial reorganisation in community members and arousal of specific survival behaviours predict social phenomena during recovery. Disrupted social attachments at impact causes intensified relatedness, heightened morale and altruism which can cause rivalry, inter-group tension and conflict in subsequent stages. These phenomena are general although varied in expression. Social recovery strategies should enable them to be modified, mitigated and pre-empted provided a future-oriented community perspective is maintained. The Victorian Black Saturday bushfires provide a natural experiment in which communities experienced similar disaster events but different social management. They provide a test of the principles and strategies of community recovery. Meetings with recovery workers, community members and professionals in 12 locations enabled comparison between where optimal social dynamics were evident, and where circumstances interfered with preferred social recovery methods. Phenomena predicted by the model in terms of supports and interferences to recovery were observed. Personal narratives and community events underline the need to anticipate community dynamics and the need for them to be managed preventively by intensive early interventions for individuals, families, groups and communities and ongoing social strategies. Important strategic priorities emerge for the management of communities and conduct of professionals in such environments. While individuals' trauma and loss captures the imagination after disasters, the matrix of recovery is community support. The quality of recovery is determined by how the social

environment is managed while people reconstruct their lives; this depends on how it is understood. The social psychology of disasters provides strategies and methods for counteracting destructive dynamics and enhancing recovery.

Keywords: *community, recovery, disasters, social attachments*

Psychological preparedness for Natural Disasters

MORRISSEY, S. (Griffith University)

This paper aims to provide an overview of the construct 'psychological preparedness', and presents the data from the initial development and validation of the Psychological Preparedness for Disaster Threat Scale (PPDTS). Natural disasters are an ubiquitous phenomenon in Australia with the past several years highlighting what is likely to be the norm over the next several decades, with climate change and its consequences a stark reality. Particularly notable disasters in Australia are bushfires, cyclones, floods, drought and earthquakes. Those weather-related events of particular relevance to community preparedness and adaptation initiatives and policies in Northern Australia are cyclones and floods. While substantial disaster mitigation infrastructure, including the services of multiple agencies and professionals in times of need, exists, there remains much to be done to more fully understand and achieve disaster preparedness and resilience in individuals and communities for recurrent natural disasters. There exists a critical need for a sensitive and valid measure of psychological preparedness for natural disasters that can be used to evaluate community vulnerability and the effectiveness of community disaster education and capacity building programs. A compelling context-specific evidence base has not been developed with respect to psychological preparedness for natural disasters. Conventional conceptualisations and measures of disaster preparedness have largely ignored the importance and mediating role of psychological preparedness. While previous research in North Queensland has provided promising findings with respect to the use of psychological preparedness interventions in

fostering community preparedness, it is essential that further research address the generalisability and the effectiveness of community education interventions incorporating psychological preparedness, and a valid measure is crucial to this goal and provides a much needed assessment tool. We are in the process of developing and validating a sensitive and standardised measure of psychological preparedness for natural disasters; this paper presents the methodology utilized and the results of the initial validation of the new measure.

Keywords: psychological preparedness, natural disasters, adaptation, community, generalisability

Prescriptive authority for psychologists: History, advances, and cautions

Chair(s): RESNICK, R. J. (Randolph-Macon College)

Discussant(s): NORCROSS, J. C. (University of Scranton)

An emerging area in clinical practice is the advancement and international interest in prescription privileges as an added competence for psychologists. The symposium will examine the history and international interest in prescription privileges for appropriately trained psychologists. Psychologists can and are being trained to safely and effectively prescribe psychoactive medications. This is a potent movement toward comprehensive psychological practice as it consolidates treatment within one psychologist who can offer both psychotherapy and pharmacotherapy to address patient needs. But, such advances are not without challenge: Will it change our identity as psychologists? How can such training be acquired? What are the ethical dilemmas that might be anticipated with this expanded competence? These issues and others will be addressed. The learning objectives of the symposium are: (1) Understand the emerging practice parameters of pharmacotherapy by psychologists; (2) Learn the clinical advantages for patients and society of combined treatment provided by psychologists; (3) Identify the probable tradeoffs and potential negative consequences of prescription privileges for psychologists (4) Learn the ethical implications of pharmacotherapy practice relating to expanded roles with patients, colleagues, consumers, and other health professions; (5) Learn the international movement and interest in prescriptive authority.

A history of the prescription privileges movement in the USA and internationally

RESNICK, R. J. (Randolph-Macon College)

A history of the prescription privileges as an emerging practice competence will be presented. Additionally, the process by which professional associations of psychologists begin their quest for this additional competence will be discussed in the context of society's needs, the political process, and obstacles that impede such acquisition. The question of "why" psychologists should prescribe is presented in terms of the evolution of the practice of psychology and the benefit to society.

Keywords: *prescription privileges, professional associations, society, practice competence*

Combining psychopharmacology and psychotherapy: An integrative perspective

SAMMONS, M. T. (California School of Professional Psychology)

This presentation will address the evidence base surrounding combinations of psychotherapy and psychopharmacology for a variety of common mental disorders. Clinical strategies for combining psychotherapy and psychopharmacology will be discussed both from the perspective of the clinical literature and the experiences of a psychologist who has integrated psychopharmacology into his clinical practice for the past 15 years. From this perspective, the presenter will address potential effects on the professional practice, education, and identity of psychologists of integrating medication into a comprehensive treatment algorithm.

Keywords: *psychotherapy, psychopharmacology, mental disorders, professional practice, medication*

Expanding application of ethical practice in pharmacotherapy: A new frontier

CAMPBELL, L. F. (University of Georgia)

The practice of pharmacotherapy presents psychologists with important advances and applications of ethical behavior and decision making in their expanded practice environments and integrated roles. Some of the practice areas in which psychologists will expand their ethical paradigm include (1)

relationship with the pharmaceutical industry, (2) consumer advertising, (3) competency in treating medically ill patients, (3) competence in diversity and multicultural practice, (4) implications for rural practice, (5) fulfilling continuing education needs, (6) effects on traditional practice, (7) informed consent, and (8) emerging consultation roles. The aim or purpose of this presentation is to describe the specific strengths and cautions of these and other new and evolving roles of psychologists as they incorporate pharmacotherapy into their practices. The roles of prescribing psychologists in hospitals, with medical patients, in consultation and collaboration with multidisciplinary health professionals introduces applications of ethical decision making and conduct that are challenging, stimulating, and that begin forging ethical thinking in concert with the continuing advances in pharmacotherapy. Psychologists in the role of prescriber only in consultation with a patient's psychologist/psychotherapist is an example of an emerging role that requires application of ethical decision making through a new, but not incompatible lens. Other examples will be offered and discussion of the developing road map for pharmacotherapists will be conducted.

Keywords: *pharmacotherapy, ethical practice, decision making, pharmaceutical industry, prescribing psychologists*

Prescription privileges in the Netherlands and developments in Europe

VAN DIS, H. (University of Amsterdam)

In the Netherlands in the clinical practice of health psychology many patients are using medication. In many clinical settings health psychologists are asked to advise GPs and medical specialists about the prescription of psychotropic medication. In the Netherlands, the process of acquiring prescriptive authority started in 2005. In 2008, post doctorate master in Clinical Psychopharmacology was started in collaboration with the New Mexico State University and the Dutch Association of Psychologists (NIP). This master consists of theoretical and clinical teaching (live teacher from the USA, distance-education and skills training in the Netherlands and the USA). The

initiative and lobby for legislative procedures in acquiring RxP was started in 2009. Recently, the European Association of Psychology Associations (EPPA) established a task force on Clinical Psychopharmacology: Prescriptive Authority.

Keywords: *health psychology, medication, psychotropic medication, prescriptive authority, Netherlands*

Prevention of eating disorders and body image concerns

Chair(s): FRANKO, D. (Northeastern University)

Discussant(s): WILKSCH, S. (Flinders University)

Decreasing risk and providing early intervention for eating disorders are important goals for clinicians, researchers, and educators. Because eating disorders occur across the developmental spectrum, age-appropriate tools are needed for both prevention and early intervention efforts in applied settings. Risk for eating disorders is highest in adolescence, when pubertal changes, increases in weight, and attention to appearance are prominent. Stresses associated with the transition to university have been linked to the onset of eating disorders as well. Moreover, body image concerns and eating problems have recently been identified in women who are in midlife and going through physical, lifestyle, and hormonal changes. The focus of this symposium will be to describe a variety of prevention and early intervention programs. The chairperson will introduce the audience to the topic and then describe three Internet-based programs, developed for early adolescents, high school students, and university students. Paper Two will describe the program *Happy Being Me*, a participant focused, three-class school program, based on an analysis of risk factors for body dissatisfaction and disordered eating, for young adolescent girls. Paper Three will detail a new program developed for midlife women, *Set Your Body Free*, which utilizes structured group meetings, homework, and focused group discussion to decrease body dissatisfaction and problematic eating behaviors in this group. Finally, Paper Four will summarize the development and use of the *Mental Health First Aid Guidelines for Eating Disorders*, which was recently launched on the Internet and offers information about how individuals, families and communities can help a loved one who might be developing or experiencing an eating disorder. The discussant will conclude the session by highlighting issues related to the implementation of these programs in applied

settings and describing clinical implications and future research directions. The key learning objectives of the symposium are: (1) To describe recent research on prevention and early intervention for body image concerns and eating disorders in applied settings; (2) To demonstrate and showcase a variety of developmentally-specific prevention and early intervention programs; (3) To illustrate the developmental issues to be considered when designing and implementing programs to decrease eating disorder risk in applied settings.

Decreasing risk factors for eating disorders with early, middle, and late adolescents

FRANKO, D. (Northeastern University)

With enhanced access to computers and the Internet, eating disorder prevention programs have taken advantage of these opportunities and expanded into multimedia technology. The focus of this presentation will be to describe eating disorder prevention programs for adolescents and college students that utilize the Internet to reduce risk behaviors and increase healthy eating. Three Internet-based programs, each developed for a specific developmental group, will be highlighted: *Trouble on the Tightrope: In Search of Skateboard Sam*, an interactive online program for early adolescents; *BodiMojo*, a website designed to decrease risk for eating disorders in high school students; and *MyStudentBody_Nutrition*, intended for university students. The paper will describe the programs, detail the randomized controlled studies carried out to test them, and highlight the results from three studies. Participants from three separate randomized controlled trials (total $N = 920$) were tested to determine the efficacy of Internet-based body image and healthy eating programs with middle school students ($n = 190$), high school students ($n = 254$), and university students ($n = 476$). Multiple measures assessing eating and exercise habits, along with measures of body image and eating disorder risk were obtained. Assessments occurred at pre-test, post-test, and three and six month follow-up. In each of the studies, significant differences were found on a variety of measures between intervention

and control participants. In each case, improvements favored participants who used the psychoeducational programs, which resulted in improved body image, eating behaviors, and increased physical activity. The use of technology offers a unique opportunity for health professionals to enhance their work by providing a tailored, interactive experience to address concerns related to eating disorder prevention. Multimedia technology offers a new platform for decreasing eating disorder risk in a variety of applied settings and across the developmental lifespan.

Keywords: *eating disorders, body image, eating disorder prevention programs, adolescence*

Evaluation of a peer-based body image prevention program for early adolescent girls

PAXTON, S. (La Trobe University), RICHARDSON, S. (La Trobe University)

Public health prevention theory highlights the benefit of reducing potent risk factors for a disorder as a means of preventing the development of that disorder. Body dissatisfaction is a potent risk factor for use of extreme weight loss behaviours and disordered eating. Modifiable risk factors for body dissatisfaction in girls include internalization of the thin media ideal, frequent body comparisons, peer appearance conversations, and appearance teasing. The goals of this talk are to describe a school-based body dissatisfaction program based on risk factor theory, *Happy Being Me*, and to present a controlled evaluation of this program. Participants were 194 grade seven girls, 104 in the intervention and 90 in the control group (mean age = 12 years and 4 months). Self-report questionnaires assessed knowledge of material covered in the program, risk factors for body dissatisfaction, body dissatisfaction, disordered eating symptoms and self-esteem. Participants in the intervention group completed questionnaires prior to the intervention (T1), 1-2 weeks after intervention completion (T2) and three months after intervention completion (T3). The control group completed the questionnaires at the same time intervals. *Happy Being Me* is an interactive, 3-session, peer focused, program

delivered in 50 minute class periods. The intervention group reported significantly more positive outcomes than the control group on measures of intervention topic knowledge, risk factors for body dissatisfaction, body image, dietary restraint and self-esteem, at post-intervention and follow-up. In addition, girls enjoyed participation. A prevention intervention based on risk factor theory shows promise in reducing body dissatisfaction in grade seven girls over a three month period. Extended follow-up is required to examine the long-term benefits of *Happy Being Me*. In addition, further examination of the effectiveness of this program in naturalistic delivery settings is required.

Keywords: *eating disorders, body dissatisfaction, self-esteem, body image, disordered eating*

Evaluation of a body image and disordered eating intervention for mid-life women

MCLEAN, S. (La Trobe University)

A growing body of research demonstrates that body dissatisfaction and disordered eating remain at high levels in midlife women. Research indicates that a number of factors associated with these high levels in midlife are different from those associated with these problems in adolescents and young women. Therefore, women in midlife are likely to benefit from an intervention that specifically addresses these unique factors. *Set Your Body Free* is designed to do this. The goals of this talk are to describe the key elements of *Set Your Body Free* and to present a controlled evaluation of the programme outcomes. Participants were 62 women aged 30 to 60 years with high body dissatisfaction and disordered eating. Thirty-three participants were randomly assigned to the intervention group and 29 to the control (wait-list) group. Questionnaire assessments of body dissatisfaction, disordered eating, self-esteem, depression and risk factors specific for midlife women were completed prior to the intervention (T1), 1-2 weeks post-intervention (T2), 3 months post-intervention (T3) and six months post-intervention (T4). In addition, the control group completed assessments 8-10 weeks post T1, prior to being offered a place in

the programme. *Set Your Body Free* is a manual-based, 8 week x 2hr, facilitated group session, cognitive behavioural therapy intervention. T1 to T2 outcomes for completers' analyses [intervention group, $n = 28$ (84.8%) participants; control group, $n = 25$ (82.8%) participants] showed that the intervention group had large improvements in body dissatisfaction, eating environment and emotional eating, depression and cognitive reappraisal of ageing-related changes to appearance. Medium to small improvements were also present for restrained eating, external eating, self-esteem and body-related self-care. The intervention group improved significantly more than the control group on all variables. Six-month follow-up data will also be presented. The positive results of *Set Your Body Free* in reducing body dissatisfaction and disordered eating provides preliminary support for the value of offering programmes designed with the specific circumstances of midlife in mind. Further examination of predictors of outcome and extended follow-up is essential.

Keywords: *disordered eating, body dissatisfaction, self-esteem, cognitive behavioural therapy, midlife*

Mental Health First Aid for Eating Disorders

HART, L. (University of Melbourne)

Eating disorders are increasingly common and associated with high levels of impairment and distress. Despite this, very few people with a diagnosable eating disorder seek appropriate professional help. Educating the social networks of individuals with developing eating disorders to encourage their loved one to seek appropriate professional help is one avenue to increase help-seeking and early intervention. This research aimed to develop guidelines for members of the community who wish to provide *mental health first aid* to someone who they believe may be experiencing or developing an eating disorder. Mental health first aid is defined as the help provided to a person developing a mental health problem or in a mental health crisis. The first aid is given until appropriate professional help is received, or until the crisis resolves. The research

involved establishing expert consensus on what constitutes best practice first aid for eating disorders through an online Delphi study. Three panels of experts (consisting of 36 clinicians, 27 caregivers and 22 consumers) rated statements that described potential first aid actions. Stringent criteria were used for accepting statements as guidelines and three rounds were completed before consensus was reached. From a total of 520 statements, 200 were endorsed as guidelines. A guideline document was developed from the endorsed statements and is now freely available to members of the public via the World Wide Web. An evaluation of the guidelines uptake and utility to web-users is currently being conducted. The guidelines represent a consensus-based resource for members of the community who wish to assist someone they know with an eating disorder. Further evaluation of their role in early intervention and increasing help-seeking in people with developing eating disorders is needed.

Keywords: eating disorders, mental health first aid, help-seeking, early intervention, crisis

Primary care psychology: An international perspective

Chair(s): VINES, R. (Monash University)

Primary Care Psychology is a relatively new development, both in Australia and elsewhere. Service delivery models involving appropriately trained psychologists working collaboratively with general practitioners/family physicians are key to these new developments. Practice in family medicine/general practice requires different models of early intervention and care than those traditionally used by privately practicing psychologists, or those working in the hospital or community health sector. The Professional Forum will discuss: how to maximise best practice; implementation of evidence-based outcomes for those suffering from high prevalence common mental disorders and chronic disease in our communities; why and how some current treatment models need to adapt to facilitate collaborative care between the professions; new shared-care approaches to treatment; and how to enhance post-graduate training models to ensure that specialist psychologists and GPs/family physicians are adequately equipped to work effectively together in the primary care setting. The Forum will provide an international perspective on Primary Care Psychology with speakers from Australia, the USA, Canada and the UK, and will highlight and describe progress in primary care mental health intervention in each of these countries. Comparisons will be made in terms of funding models available for the work; frequency of roll-out of collaborative care in each country and issues arising in the implementation of the shared care model; and whether training models have yet been adapted to include clinical experience in primary care prior to graduation. A "Report Card" will be provided for each country indicating "progress, threats and opportunities" relevant to primary care psychological service delivery. Problems unique to each country in relation to shared care will be outlined, both from the perspective of the psychologist and the GP/family physician, as well as current dilemmas in health policy

development. The speakers will elaborate on these new developments and how the model enhances access to treatment for high prevalence mental disorders in metropolitan, regional and rural settings. A panel discussion will also be held in relation to optimal frameworks of collaborative care and how to facilitate the roll-out of these as part of best practice in family medicine. The key learning objective of this symposium are to provide an international perspective on: (1) How to maximise best practice in the Primary Care setting; (2) Evidence-based outcomes for those suffering from high prevalence common mental disorders and chronic disease conditions in our communities; (3) How and why some current treatment models need to adapt to facilitate collaborative care between the professions; (4) New shared-care approaches to treatment; and (5) How to enhance post-graduate training models to ensure that specialist psychologists and GPs/family physicians are adequately equipped to work effectively together in the primary care setting.

Primary care reform in Canada: a role for clinical and health psychology?

GRENIER, J. (University of Ottawa), RITCHIE P. (University of Ottawa), CHOMIENNE, M. H. (University of Ottawa)

In the past seven years Canada has invested much energy in reforming its primary health care system. This has given rise to a number of initiatives across the 10 different provinces as health care in Canada is of provincial jurisdiction. More recently, the focus has shifted on primary mental health care. Within the Canadian publicly-funded primary care system, a range of mental health interventions is offered, with the family physician at the core. Low prevalence mental disorders such as schizophrenia are generally referred to psychiatrists for pharmacological treatment. High prevalence/common mental illnesses such as depression are treated either within the public or private system. In the public system, usual care involves drug therapy and/or generic counseling delivered by the family physician. Recent primary care reform has facilitated the development of alternative service delivery models involving

interdisciplinary care teams. Examples include "Shared Mental Healthcare" initiatives, which most frequently involve collaboration between family physicians, psychiatrists and mental health workers or social workers. We will present a number of those initiatives, including different funding and service delivery models. Focus will be given to the key elements that drive this movement towards change such as collaborative practice, and the professions chosen to participate as part of the core primary health care team. In addition we will describe some of the perceived obstacles in having psychology and family physicians work together. Particular attention will be given to the current role and place psychology occupies in primary care in Canada. Psychology's place in Canadian Primary Care will be contrasted with that of psychology's contributions in Australia's Medicare. We will also present the latest developments in training opportunities for family medicine and psychology residents working together. A "Report Card" will be provided indicating "progress, threats and opportunities" relevant to primary care psychological service delivery. Problems unique to Canada in relation to shared care will be outlined, both from the perspective of the psychologist and the family physician, as well as current dilemmas in health policy development.

Keywords: Canada, primary health care, primary care reform, shared mental healthcare, family physician

Australian Primary Mental Health Reforms - overview, evaluation and international implications

BLASHKI, G. (University of Melbourne), PIRKIS, J. (University of Melbourne), FLETCHER, J. (University of Melbourne), BASSILIOS, B. (The University of Melbourne), KING, K. (University of Melbourne), RAMADAN, R. (University of Melbourne), KOHN, F. (University of Melbourne)

The aims of the presentation are to describe Australian primary mental health care reforms over the last decade, to overview the evaluation findings, and to reflect on the implications for reforms for the United Kingdom and Canada. We describe the Better Outcomes in Mental Health Care and the

Better Access to Mental Health programs, and present selected evaluation findings from successive evaluation reports. We also describe a supplementary program, the Mental Health Professionals Network, and how it is facilitating local interdisciplinary collaboration between mental health professionals. We will present evaluation findings including the implications of different models of care, the experiences of health practitioners and some patient outcome data. Australian primary mental health reforms represent a substantial national investment in improving access to high quality mental health care. There may be lessons from the Australian experience for Canadian and United Kingdom reforms as they strive to address the same challenges.

Keywords: primary mental health care, Better Outcomes in Mental Health Care, Better Access to Mental Health programs, Mental Health Professionals Network, Australian primary mental health reforms

Primary Care Psychology in the United States

BRAY, J. (Baylor College of Medicine/American Psychological Association)

The practice of psychology is at an important juncture and is in the process of evolution and change to meet the needs for our population in the 21st century. Primary care psychology is an exciting new area for the profession. In the U.S., primary care providers treat over 70 percent of mental health problems, without assistance from psychologists or any other mental health providers. Primary care providers are the de facto mental health system due to policies and over-reliance on medications. Research indicates major health problems, such as diabetes, heart disease and obesity, are due to psychosocial and lifestyle problems -- issues that are not effectively addressed by the medical profession. Psychologists are often not involved in preventing and treating these problems because we are not seen as an integral part of the health-care team. The opportunities in primary care psychology necessitate additional knowledge of primary care and different skills in caring for primary care patients that reflect the evolution of psychology from being a

mental health profession to a full partner in the health professions. This presentation will discuss (1) the present status of psychologists working in primary care in the United States and its relationship to the health care reforms that are occurring; (2) practice opportunities in primary care in private and public settings; (3) how to market your practice to primary care providers; (4) the use of technology and electronic health records in primary care practice; and (5) future challenges in developing integrated health care systems and training models for the future of psychology practice.

Keywords: primary care providers, primary care psychology, health care reforms, United States

Problem solving appraisal and psychological adjustment in a global context

Chair(s): HEPPNER, P. (University of Missouri)

Ever since Dewey's influential publication of 'How We Think' (1933), there has been a strong focus in psychology on how people cope with and solve difficult life problems. In fact, the focus on coping and applied problem solving has been one of the most intensely investigated topics in United States (US) in the last two decades (Skinner, et al, 2004). This symposium focuses on the cultural generalizability of the most frequently used applied problem solving in the US, the Problem Solving Inventory (PSI; Heppner & Pedersen, 1982); the PSI measures a person's appraisal of their problem solving abilities and attitudes (i.e., their self-evaluative capacity to resolve problems). Briefly, the PSI consists of three factors: (a) Problem-Solving Confidence (b) Approach-Avoidance Style, and (c) Personal Control. Over 130 studies (see Heppner, Witty & Dixon, 2004), support the construct, convergent, and discriminant validity of the PSI. The research clearly suggests that people's appraisal of their problem-solving ability is related to a wide range of psychological adjustment and physical health indices, to the approach they use in coping with stressful problems, and to their resolution of educational and vocational issues. For example, generally speaking, people who have a more positive appraisal of their problem-solving skills are more likely to report a positive self-concept, higher levels of self-efficacy, more social support, and lower levels of depression, anxiety, suicidal ideation, social uneasiness, and irrational beliefs. Nonetheless, what we know about problem-solving appraisal is based on primarily White U.S. samples. This symposium significantly extends the literature by examining the external validity or generalizability of the PSI to four countries with quite different cultural contexts: Australia, China, Italy, and Taiwan. Key learning objectives of the symposium are to: (a) acquire current knowledge about the PSI research literature and

its role in psychological, physical, vocational adjustment; (b) learn about the generalizability of the PSI to four other cultural contexts as indicated above; (c) be sensitized to the cultural context in transporting psychological inventories across different cultures, and (d) learn about future research directions as well clinical applications of the PSI.

A literature review of the Problem Solving Inventory: Conclusions, implications, and future directions

HEPPNER, P. (University of Missouri)

The first presentation will provide an historical background of the development of the PSI as well as overview of the PSI research literature from the last 28 years; most importantly, this presentation provides the context for the following four presentations. The research will be summarized in four major categories: psychosocial adjustment, physical adjustment, coping strategies, and career development. For example, over 80 studies have examined relations between the PSI and psychological adjustment; a broad range of studies have suggested that problem-solving appraisal is associated with general psychological and social adjustment, depression, hopelessness and suicide potential, anxiety and worry, alcohol use and abuse, eating disorders, childhood adjustment, and childhood trauma. Over 35 studies have found that a positive problem-solving appraisal is associated with lower levels of depression; a negative appraisal of one's problem solving abilities is strongly predictive of depression for individuals experiencing high levels of stress, but not for those experiencing low levels of stress. A negative problem-solving appraisal is associated with feelings of hopelessness and suicidal ideation. A person's problem-solving confidence, in particular, is a relatively strong predictor of their feelings of hopelessness. Several conclusions from the research literature will be highlighted and discussed. For example, the research clearly suggests that people's appraisal of their problem-solving ability is related to a wide range of psychological adjustment and physical health indices, to the approach they use in coping with stressful problems, and to their resolution

of educational and vocational issues. In essence, how people evaluate their problem-solving capabilities is in general consistent with the implementation of their problem-solving skills across a range of stressful personal problems. However, there are some exceptions. For instance, some people overestimate or underestimate their problem-solving abilities for a variety of reasons (e.g., sociopathic personality styles), resulting in a mismatch between their problem-solving appraisal and performance. Thus, problem-solving appraisal should not always be considered as synonymous with problem-solving skills. Several recommendations will be made for both clinical applications and future research, such as calling for investigations across different cultural contexts to understand the similarities and differences in applied problem solving across cultures.

Keywords: problem-solving, psychosocial adjustment, physical adjustment, coping strategies, career development

Examining the validity of the Problem Solving Inventory in Australia

BECCARIA, G. (University of Southern Queensland), MACHIN, A. (University of Southern Queensland)

The aim of this study was to: (a) test the structural validity of the PSI using CFA in two samples of students from the University of Southern Queensland (USQ), and (b) examine the relationship between the PSI and its subscales with Positive and Negative Affect, Depression and Anxiety. This study used Confirmatory Factor Analysis (CFA) to test the PSI factor structure, which is a superior method to test the construct validity of the PSI, and none published in Australia. The PSI was administered to 556 undergraduate students enrolled at USQ in 2008 and a further 497 undergraduate students enrolled at USQ in 2009. On both occasions, the PSI was part of a battery of measures; other measures included the Positive and Negative Affect Scale (Watson, Clark, & Tellegen, 1988), the Depression Stress and Anxiety Scales - 21 (Lovibond & Lovibond, 1995). Administration was via a web-based survey and students were given a choice of participation for course credit or are part of a raffle draw. The

results of the CFA replicated the findings of previous research (see Heppner et al. 2004), and represented a sound fit to the model with no alterations to the original structure. Specifically, the 2008 data revealed CMIN/DF = 6.61, GFI = .94, RMSEA = .10; CFI = .96; NFI = .95; RFI = .93; PNFI = .63. The 2009 data yielded similar results, CMIN/DF = 5.6, RMSEA <.10; CFI = .96; NFI = .95; RFI = .91; PNFI = .51. The PSI and its subscales were found to significantly correlate both affect and mental health variables at $p < .01$; with correlation coefficients between $r = .29$ for AA and Negative Affect, and $r = .45$ for PSC and Depression. These findings indicate good predictive validity. This study provides strong structural validity of the PSI in the Australian population; moreover, the study suggests that the PSI is predictive of affect and mental health variables in Australia populations as well. These results suggest continued use of the PSI in Australian populations is warranted at this time. Future research directions will be discussed.

Keywords: validity, problem-solving, Australia

Examining cultural validity of the Problem-Solving Inventory in Italy

NOTA, L. (University of Padova), HEPPNER, P. (University of Missouri), FERRARI, L. (University of Padova)

The aim of this study was two-fold: (a) examining the generalizability of the PSI factor structure, and other psychometric estimates of the PSI, namely differences associated with gender, and associations with intelligence, study motivation, and use of learning strategies, and (b) examining relationships between the PSI and personality characteristics. In study 1, 15,000 Italian adolescents (5,000 from the North, 5,000 from the Center, 5,000 from the South) participated in the study; 50% were male and 50% female. The PSI, along with the Standardized Magellano Università (Soresi, 2000) battery to assess professional interests, types of interests, cultural interests, aptitudes and general intelligence, and learning strategies (e.g., time management, anxiety control, motivation). The students were also asked if they had already made a career decision to study at a university. In study 2, 577 students from the north of Italy,

32.4% male and 67.6% female, completed the PSI and Myers-Briggs Type Indicator, which assesses four personality dimensions (e.g., judging-perceiving). Study 1 found that across all three areas of Italy, the results revealed: (a) a similar but slightly different PSI factor structure (e.g., the third factor was best conceptualized as Emotional Control), (b) sex differences (which have been rarely found in U.S. samples), (c) in contrast to previous studies, the PSI accounted for 6% of the variance in intelligence, (d) a tendency to approach problems was consistently predictive of engaging in a wide range of learning strategies, and (e) significant differences were found between the decided and undecided students on all three PSI factors. Study 2 found that the students with more effective levels of problem solving also presented personality styles with strong scores on both the thinking and judging dimensions. The data set used in this investigation is the largest PSI sample ever collected in a Western European country. In addition to providing useful psychometric information for an Italian PSI, the presenter will discuss the complexities of problem-solving appraisal cross culturally as well as a few methodological caveats regarding the use of the PSI and other U.S. based inventories cross-nationally (e.g., the necessity to examine the cultural validity of assessment instruments utilized in cross-national studies).

Keywords: *cultural validity, problem-solving Inventory, learning strategies, intelligence, study*

Problem-solving appraisal, career indecision, and psychological adjustment in mainland China

HOU, Z. (Beijing Normal University), HEPPNER, P. (University of Missouri)

The aim of two studies conducted in Mainland China was to: (a) examine the generalizability of the factor structure of the Problem Solving Inventory (PSI) through confirmatory factor analysis among Chinese college students; and (b) examine the relationship between the PSI and both career related factors and psychological adjustment. In study 1, 736 undergraduate students from four Mainland Chinese universities were administered the PSI, Career Decision-Making Difficulties

Questionnaire (Gati et al., 1996), and Career Locus of Control (Millar & Shevlin, 2007). In study 2, 357 students from three Mainland Chinese universities completed the revised Chinese PSI and Symptom Checklist 90 (Derogatis, 1983). Study 1 found that the results indicated a poor fit of the original structure of the PSI in Mainland Chinese college student population (RMSEA= .084, GFI= .81, AGFI= .78, NNFI=0.85, CFI= .86). A slightly revised Chinese PSI (i.e., the second factor consisted of fewer but similar items as the original PSI, but now seemed to best depict Reflective Thinking; the third factor was slightly revised/conceptualized as Emotional Control) revealed a better fit to the data: RMSEA= .061, GFI= .91, NNFI= .92, CFI= .93); the relationship between the Chinese PSI and CDMD revealed more career decision-making difficulties were associated with more negative PSI scores, which is consistent with the pattern of relationships found in the U.S. The CFA results of study 2 revealed a good fit for the Chinese PSI (RMSEA= .061, GFI= .91, NNFI= .92, CFI= .93), and also found a significant relationship with the SCL-90 such that more negative PSI scores were associated with more psychological distress, which replicates findings from the U.S. The two studies suggested a slightly different construct of problem-solving appraisal in Mainland Chinese college students, subsequently labeled the Chinese PSI. The results suggest the different factor structure is stable across groups, as well as related to career related factors and psychological adjustment in expected directions. The complexity of examining the problem-solving appraisal cross-culturally and its implications will be discussed.

Keywords: *problem-solving, career indecision, psychological adjustment, China, psychological distress*

Applied problem solving, anxiety, and spirituality in Taiwan

HOU, Z. (Beijing Normal University), HEPPNER, P. (University of Missouri)

The aim of the study was to: (1) examine the factor structure of the well-known Problem Solving Inventory in Taiwan, (2) investigate the relations between problem solving, spirituality

and levels of state and trait anxiety among college students, and (3) determine whether the PSI, Trait anxiety, and the Spirituality Beliefs scale predicts State anxiety. Determining the role of problem solving in psychological adjustment in Taiwanese culture can provide future direction for career education programs and counseling services. 667 Taiwanese college students at National Taipei College of Business completed the PSI, State and Trait Anxiety Scale, and the Spirituality Scale. The results of the CFA provided a poor fit for the original three factor model of Heppner and Petersen (1982). Subsequently, a second CFA of the three factor Chinese PSI (Lu et al, 2009) suggested a good fit with the data: $\chi^2 = 367.89$, $p < .001$, $RMSEA = .05$ (90% CI = .046 -.058), $CFI = .93$, and $NFI = .90$. Pearson correlations revealed the PSI total and factors were significantly correlated with both state and trait anxiety, specifically more negative problem solving scores were related to higher levels of anxiety; these findings replicate U.S. findings. In addition, the PSI was significantly correlated with spirituality scores revealing more positive problem solving were related to stronger spirituality beliefs; these are new findings and suggest a potentially critical link between spirituality and problem solving in dealing with important life stressors. Finally, a simultaneous regression revealed that state anxiety was predicted by trait anxiety, two PSI factors (problem solving confidence, reflective thinking) and spirituality. This study provides additional support for the revised three factor Chinese PSI in a Taiwanese population. In addition, the results provide important construct validity estimates through significant associations in theoretically consistent ways with state and trait anxiety, as well as spirituality. These results not only underscore the important role of problems solving in psychological adjustment in Taiwan, but also an important caveat to examine the cultural validity of western based inventories in East Asian cultures. Future research directions as well as clinical applications will be discussed in the presentation.

Keywords: *problem-solving, trait anxiety, spirituality, Taiwan, career education programs*

Process issues in offending behaviour programs: Challenges and changes over time

Chair(s): BIRGDEN, A. (Corrective Services New South Wales)

This symposium presents an overview of the therapeutic alliance and examines the importance of attending to its constituent elements during the course of treatment with forensic clients. The therapeutic alliance describes the process of engagement with clients and comprises the development and achievement of shared change goals, agreement on therapeutic tasks, and the development of a bond and the therapeutic relationship during the course of treatment (Bordin, 1979). These processes have traditionally been posited as central to the change process in general therapeutic contexts, but little empirical work has examined its relevance in correctional settings where clients often present with complex and pervasive difficulties in relatedness. This symposium will provide a unique opportunity to explore recent research on the therapeutic alliance in this context. The key learning objectives are to: explore the relevance of the therapeutic alliance in forensic settings; examine the time course of the therapeutic alliance in offending behaviour treatment from the perspective of client, clinician and observer; examine the nature of ruptures that can occur within correctional environments and responses that clinicians have to these difficulties; and to recommend practices to support clinicians in program delivery and enhance treatment outcomes for correctional clients.

It takes two to tango: Tracking the time course of the therapeutic alliance in a violence prevention program

ROSS, E. (Victoria University of Wellington)

The therapeutic alliance has been described as an "interpersonal dance" between therapist and client, reflecting its dynamic nature over

the course of therapy. In the treatment of high-risk violent offenders this “dance” is often lengthy and complex due to the intensive work needed to rehabilitate this challenging clientele. This presentation discusses our longitudinal research into the time-course of the therapeutic alliance formed between therapists and offenders in the 36-week Te Whare Manaakitanga violence prevention program at Rimutaka Prison in Wellington, New Zealand. We examined the time course of the therapeutic alliance across four time points of the program as rated by therapists, clients and observers. We will present data on the magnitude of differences in alliance scores between time-points, the pattern of the alliance, and whether the perspective of the rater affected these results. We compare our findings to previous research and finally we discuss the clinical and research implications of our results. The therapeutic alliance followed a linear pattern over time, increasing over the course of therapy. The magnitude of alliance scores differed by rater, but the linear pattern was shared by all raters; suggesting a shared perspective of the therapeutic alliance between therapists, clients and observers.

Keywords: therapeutic alliance, interpersonal factors, therapy, violence prevention, longitudinal research

The therapeutic alliance and group process issues in forensic group treatment programs

PAISLEY, E. (University of Melbourne)

The aim of the research project was to elucidate qualitative data from clinicians regarding the ways in which they respond to or manage difficult forensic clients or difficult situations which occur in the context of group treatment programs. In other words, the study was designed to gather information regarding the way in which clinicians negotiate therapeutic alliance ruptures. It was an exploratory study and the examination took the form of a questionnaire completed by therapists and a subsequent analysis of the data using an inductive and deductive thematic analysis approach. There were 14 therapists who participated in this study, comprising 10 psychologists, three provisional psychologists

and one social worker. There were four male and 10 female therapists. Participants were from diverse backgrounds including mental health, correctional and community settings. The analysis of the 14 questionnaires suggested the major finding that regardless of theoretical orientation, there was a recognition that process issues were an important component of group therapy and one that can be utilized by therapists to enhance treatment outcome. The majority of therapists acknowledged that this was a difficult aspect of group therapy which requires skill, guidance and supervision in order to manage these processes well. It is recommended that further research is conducted in this area to improve our understanding of group therapy and develop a practical manual (in addition to existing theory manuals) to assist therapists manage group process issues. Such research and manuals might facilitate the delivery of more effective interventions in forensic settings by increasing therapist skill, confidence and optimum treatment outcomes. The findings of this research project may contribute toward understanding the nature of the therapeutic alliance, the mechanisms that underlie this relationship and developing the “if-then” specifications or ways of repairing alliance ruptures. It is hoped that this project and similar research may improve our understanding of the psychological processes in groups, result in better outcomes for those offenders that undertake group treatment programs and ultimately reduce the risk of recidivism.

Keywords: forensic settings, group treatment programs, therapeutic alliance, thematic analysis, psychological processes

The process of rupture repair in offending behaviour programs: If I care, will it make a difference?

KOZAR, C. (Deakin University)

The nature and quality of the therapeutic relationship is widely regarded as central to the change process in therapeutic interventions. A multitude of factors exist in forming effective alliances in the delivery of offending behaviour programs, but this is an area that has not been widely empirically

investigated. In this paper, the findings of a series of focus groups with correctional program providers are presented. 27 clinicians who delivered offending behaviour programs described their experiences of the therapeutic alliance. Four main areas in which ruptures could emanate were identified in focus groups: the context; the clients; co-facilitators; and the clinicians themselves. Strategies to respond to these difficulties are discussed, with particular attention paid to relating to those clients who demonstrate traits of personality disorder. Recommendations to improve the quality of the therapeutic alliance in forensic populations are presented.

Keywords: therapeutic intervention, offending behaviour, correctional facility, therapeutic alliance, personality disorders

Processes related to forgiveness following interpersonal and intergroup transgressions

Chair(s): WERTHEIM, E. (La Trobe University),
BREHERTON, D. (University of Queensland)

The last decade has seen an upsurge of research interest into the process of forgiveness. Forgiveness takes place in the face of a perceived hurt or transgression carried out by another person or group. The process of forgiveness can be seen as a letting go of negative thoughts, feelings, and motivations towards the offending party and replacing them with more positive thoughts, feelings, and motivations. In this symposium four papers are presented which approach the process of forgiveness from different vantage points. Both interpersonal forgiveness and intergroup forgiveness processes are addressed, and research methods cover interviews, survey methodology, and laboratory studies. The symposium begins with an interview study in which a range of people reported on hurtful interpersonal incidents that were forgiven and incidents that were not forgiven. Semi-structured interviews resulted in the identification of a broad range of themes of what results in forgiving others. The second paper describes in two large adult samples the development and testing of a factors related to forgiveness measure. The ability of those factors to predict forgiveness of a specific interpersonal transgression is tested and supported. Two further papers focus on the process of intergroup forgiveness. The first addresses the relationship between forgiveness and justice. Forgiveness is often assumed to require the sacrificing of justice standards. In this paper two important distinctions are made. The first distinction involves contrasting the traditional view of retributive justice with a restorative justice approach. The second distinction is between forgiveness as a sentiment versus an act. Two laboratory studies are presented exploring the influence of status/power and the questioning of presumably shared values in the

process of forgiveness. The final paper examines forgiveness in the specific context of Indigenous Australians. An important event took place in 2008 when the Australian government provided a formal apology to Indigenous Australians related to the Stolen Generations. In this paper, Indigenous responses to the apology are described, and the relevance of forgiveness in the context of Indigenous – White Australian relations is discussed. Themes arising across the different papers will be highlighted, including the crossover of findings and theory from the interpersonal to the intergroup context.

An interview study into factors related to forgiving others for interpersonal transgressions

WERTHEIM, E. (La Trobe University), HODGSON, L. (La Trobe University), BLATT, L. (La Trobe University)

The aim of this paper is to introduce the concept of forgiveness by exploring how individuals describe the factors that promote and inhibit forgiving others after hurtful interpersonal transgressions. The study was designed to be hypothesis-generating, qualitative, and descriptive; and to obtain in-depth information from a diverse group of people across a range of interpersonal transgression contexts about what they perceived to be the most important elements resulting in forgiving or not forgiving others. Participants were recruited through a social network/snowball technique originating from four researchers; through advertisements in a university newsletter; and as a response to a radio interview of the first author. The interview sample consisted of 31 participants (36% male, 64% female), who ranged in age from 19 to 64 years. Participants represented a range of education levels, marital status, religions, country of birth, and occupations. Participants were interviewed by one of five interviewers in a semi-structured interview (1 to 1 ½ hours) asking participants to describe and then discuss an incident when they felt wrongly treated by someone else, felt hurt and did not forgive the offending person. The description of this incident was followed by their discussing a parallel incident and its aftermath when the participant did forgive the

offender. In each case semi-structured questions aimed to uncover barriers and inhibitors of forgiving in those two situations. Interviews were transcribed and each interview was analysed by two researchers. Participants reported a wide range of incidents covering organisational, friendship, family, marital and stranger offences, and which involving perceived lying, betraying, breaking trust, critical remarks, unfair actions, relationship breakup, affairs, assault, and business sabotage. Facilitators and barriers to forgiving were separated into three main categories, including offender-related factors (e.g., apology, perceived benign intent); victim-related (e.g. perspective taking) and external factors (e.g., time passing, helpful third parties). A broad range of factors perceived by individuals to be factors inhibiting or promoting forgiveness were reported suggesting that forgiveness is a multi-factorial process. The next step in research needed is to develop a quantitative measure of these factors and assess their relative importance in a larger sample.

Keywords: forgiveness, interpersonal transgressions, inhibitors, promotion

Development of a model and measure of social-cognitive factors predictive of forgiveness

BLATT, L. (La Trobe University), WERTHEIM, E. (La Trobe University)

Although researchers have attempted to examine various factors that predict forgiveness following a specific offence, such as relationship factors, positive offender responses, and victim beliefs about the offender, there have been few attempts at incorporating these factors into an overall model of factors associated with interpersonal forgiveness. The aim of this research was to examine a range of factors that have been asserted to predict likelihood of forgiveness following a specific interpersonal transgression. A multi-factorial conceptualization of factors predicting forgiveness is proposed and a measure developed to assess these factors, including determining the factor structure, test-retest reliability construct validity and incremental

validity. Two samples were recruited (total $N > 500$), the first using a social networking/snowball approach. The second sample was recruited through further networking, a university psychology department participant registry, and wellbeing workshops. Volunteers completed an anonymous online questionnaire or a paper format questionnaire. Participants described a specific time when someone had hurt them; participants then answered questions related to hurtfulness of the incident, and a series of items covering characteristics of the offender or offence and beliefs about forgiving the offender. Other measures included Transgression Related Interpersonal Motivations Inventory, Heartland Forgiveness Scale, Forgiving others subscale, neuroticism and agreeableness measures, and measures to assess construct validity. A subset of participants completed the new items a second time for test-retest reliability. Initial exploratory factor analyses on sample one resulted in seven factors, which were then confirmed in sample two using confirmatory factor analysis (AMOS). Factors included belief that forgiveness means condoning, spirituality, intent of the offender, positive post-transgression offender responses, perceived likelihood of offender repeating offences, social influence and valuing the relationship. Construct validity of the factors is reported. After accounting for neuroticism, agreeableness and disposition to forgive, the new factors accounted for a substantial proportion of the variance in forgiveness levels related to a specific transgression. A new, more comprehensive, model and measure of factors related to forgiveness was developed in this research and an extended model of how those factors combine to enhance the prediction of situational forgiveness supported the model and measure.

Keywords: forgiveness, interpersonal forgiveness, interpersonal transgressions, Transgression Related Interpersonal Motivations Inventory, Heartland Forgiveness Scale

The justice-restoring effects of forgiveness in intergroup contexts

WENZEL, M. (Flinders University), OKIMOTO, T. G. (Yale University)

Forgiveness is often assumed to be antithetical to subjective justice, requiring the sacrificing of justice standards. In our view this notion assumes narrow understandings of justice (as retributive, not restorative) and forgiveness (as a sentiment, not an act). We argue that two symbolic implications of transgressions fuel feelings of injustice in victims: the lowering of the victim's status/power and the questioning of presumably shared values. Forgiveness can alleviate either concern; it can give victims moral status and control, and express the expectation or hope that the offender will re-endorse shared values. Forgiveness can restore justice via either of these mechanisms, depending on the victim's (oppositional vs. shared) identity with the offender. Recent research supported these processes in interpersonal contexts using hypothetical situations. The present research extends the analysis to intergroup contexts and uses a laboratory paradigm. Two studies were conducted with university students as participants ($N = 61$ and 155 , respectively). The studies used the same basic paradigm, in which two groups allegedly competed against each other in an anagram task and the outgroup victimized the participant's ingroup by unjustifiably diminishing its winnings. The ingroup then allegedly decided by vote to send a forgiving versus unforgiving message to the outgroup. Subsequently, participants rated their perceptions of status/power and value consensus, their sense of justice, anger and feelings towards the outgroup. Study Two additionally manipulated the ingroup's status relative to the outgroup. The results consistently showed that the group's act of forgiveness led to greater perceived justice, partially mediated by perceived status/power. In turn perceived justice was related to less anger and more liking for the outgroup. Study Two showed that the mediating role of perceived status/power was moderated by the manipulated status relation between groups, as it held most strongly for low-status groups. The results confirm the theoretical analysis. Acts of forgiveness can have beneficial effects on justice perceptions, which can contribute to the reconciliation between parties. Further, in intergroup contexts this effect of forgiveness appears mainly due to its capacity to restore

feelings of status and power in the victimized group.

Keywords: *forgiveness, justice, transgressions, reconciliation, conflict*

Indigenous responses to the Australian apology to the Stolen Generations

PHILPOT, C. (University of Queensland), BALVIN, N. (University of Queensland), MELLOR, D. (Deakin University), BRETHERTON, D. (University of Queensland)

Although apologies for intergroup offences are frequently requested and given, psychological research has generally found these have limited effects on forgiveness. A key limitation of the extant work is that it has relied on experimental manipulations of intergroup apologies with populations unaware of existing apologies and arguably less affected by them. This approach offers experimental control, but cannot speak to the effects of group apologies for actual victim group members who are aware of apologies and committed to the causes for which they are articulated. The current paper aims to address this gap by examining Indigenous Australian responses to the Australian government's apology to the Stolen Generations. It is hoped that this research will improve our understanding of the effects of intergroup apologies. More generally, it is hoped that this research will contribute to an understanding of the status of White-Indigenous Australian relations as a result of the apology. Semi-structured qualitative interviews were conducted with 30 Indigenous Australians from remote and urban areas across Australia. Transcripts of the interviews were analysed using the Leximancer text analysis system. Indigenous elders were invited to reflect and comment on the thematic categories, language and interpretations, with their feedback shaping the final conclusions. Concept analysis showed that participants experienced a range of different emotions when hearing the apology. Some report being moved by the apology, others report being initially cynical. Amongst remote participants there was some feeling that the apology was for "whitefellas". Attitudes towards the apology over time were influenced both by attitudes towards

government policies on Indigenous issues as well as perceptions of societal attitudes towards Indigenous people. For most participants the apology appeared to be unrelated to forgiveness for the government or White Australians. Intergroup apologies appear to affect victim groups. However, similar to existing intergroup apology research, the link between apologies and forgiveness appears weak. Furthermore, the apology appears to have limited longitudinal effects. With the passage of time, the status of White-Indigenous Australian relations appears to be determined more by the prevailing socio-cultural milieu than by the existence of an apology.

Keywords: *intergroup offences, forgiveness, intergroup apologies, Indigenous Australians, Stolen Generations*

Progress and challenges in defining counselling psychology in Canada, China, and South Africa

Chair(s): YOUNG, R. (University of British Columbia)

From its origins in the United States, the discipline of counseling psychology has begun to expand across the globe. However, this area of applied psychology is at different stages of establishment in different nations, and the way that it has developed has varied in response to unique social and cultural situations. This symposium presents descriptions of the way that counseling psychology is being defined in three countries with very different socio-cultural contexts: Canada, China, and South Africa. The individual presentations delineate the processes by which counseling psychology is establishing itself as an area of practice in each country, highlighting some of the distinct circumstances that the discipline has faced in these nations, as well as successes in developing it as a defined area of practice. The three presentations approach the topic of counseling psychology's emergence from somewhat different perspectives. The first presentation focuses on a formal process that was undertaken by the Canadian Psychological Association to develop a suitable definition of the discipline. The second presentation is a report of a recently conducted empirical study assessing positive and negative perceptions of counseling psychology in its early stages of development in the People's Republic of China. The final presentation describes the ongoing debate about appropriate scope of practice and the efforts currently underway distinguishing counseling psychology from other areas of applied psychology in South Africa. Symposium attendees will develop broad understanding about the processes and issues involved in defining a specific area of applied psychology, counseling psychology, in different countries across the globe. Participants will learn about different initiatives that can be undertaken to better establish the discipline of

counseling psychology in countries with very different historical traditions of counseling practice, as well as some of the challenges, debates, and negative perceptions that counseling psychology may be confronted with as it defines itself in different nations. This knowledge may be of use to practitioners who identify with counseling psychology in other regions, who wish to advance the growth of the discipline in their own countries.

Forging a definition for counselling psychology in Canada: Processes and outcomes DOMENE, J. (University of New Brunswick)

Although counselling psychology in Canada has existed as a recognized specialization within applied psychology for over 20 years, there has been a surprising lack of consensus about how it should be defined. This paper aims to describe the socio-historical context that has contributed to this situation in Canada, such as the overlapping domains of practice between guidance counseling and counseling psychology and the lack of recognition by provincial regulatory bodies. Also described are recent efforts by members of the Canadian Psychological Association to develop a Canadian definition of counselling psychology, and the outcome of those efforts. Although the outcome of these efforts may reflect the unique Canadian context, the process may serve as a model for other countries attempting to define counselling psychology for themselves. Over the span of two years, the committee formed by the Counselling Psychology Section of the Canadian Psychological Association engaged in a comprehensive process encompassing systematic review of literature and other documentation, consultation with experts in the field, and extensive consultation with the membership of the organization. The committee succeeded in developing a specific definition of counselling psychology that reflects the Canadian context; a definition that is grounded primarily in values of agency, holism and sensitivity to diversity; but also providing guidance in terms of typical areas of practice and research. Moreover, the systematic process undertaken to form the definition ensured that all major stakeholder groups (e.g., practitioners, academics, training programs, member of related professions) had

a voice in the process. Despite historical and regulatory circumstances that increase confusion, it was possible to develop a definition of the discipline that reflected both the existing literature and the perspectives of multiple stakeholder groups. Thus, the process undertaken by the committee appears to be a successful one, and is recommended for other groups who wish to define counselling psychology in their own countries.

Keywords: counselling psychology, vocational guidance, Canada, Canadian Psychological Association

How people define counseling and counseling psychology: Chinese professionals' and non-professionals' views?

HOU, Z. J. (Beijing Normal University)

Counseling psychology has about one hundred years of history in the United States. However, it is a relatively new discipline in many Asian countries, including the People's Republic of China. Despite the newly emerging nature of the discipline and cultural factors that pose a barrier to service delivery, counseling psychology is developing at a very rapid pace in China. This paper presents a preliminary effort to examine how individuals in China define counseling and counseling psychology, and in what situations they will be willing to see a counselor? The sample consists of (a) parents of school-aged children, (b) university aged students, and (c) professionals in a university counseling center, all residing in a large metropolitan centre in China. Semi-structured interviews and questionnaires are used to obtain a descriptive understanding of the perception of counseling and counseling psychology from professionals and non-professionals in China. Cultural factors and other environment factors will be included in the analysis. It is anticipated that the analyses will identify the various ways that Chinese adults and youth perceive counseling and counseling psychology, as well as the range of presenting problems that may lead an individual to seek counseling services, as opposed to other forms of support. Additionally, a range of cultural and environmental factors that are salient to the

growth of counseling psychology in present-day China are identified. Some of these factors promote the growth of the discipline (e.g., increased urbanization resulting in loss of other forms of social support), while other factors may impede its development (e.g., reluctance to discuss family problems with outsiders). Counseling psychology is growing rapidly in China, but relatively little research has been completed to document its growth, or to understand the perceptions that professionals and the general public have about the discipline. By addressing this issue, the present study provides an empirical base for what can be done to promote continued growth and minimize problem areas in the future.

Keywords: counselling psychology, China, cultural factors, environmental factors, service deliver

Defining counselling psychology in transitional times: The case of South Africa

WATSON, M. (Nelson Mandela Metropolitan University)

This presentation follows on from earlier research by the author which explored the historical roots of counselling psychology in South Africa, the need for counselling psychology in South Africa to transform itself as a profession, as well as an analysis by practicing counselling psychologists of perceived strengths and weaknesses of the profession. In the last two years there has been considerable public debate about the profession of counselling psychology and what its scope of practice should entail. Defining such a scope has inevitably resulted in several documents from the country's Professional Board as well as its Counselling Division that have attempted to explore how counselling psychology may be defined differently from other psychology professions. This presentation examines the definitions of counselling psychology inherent in this latest documentation and considers such a redefinition of scope of practice against the socio-political climate in which counselling psychology in South Africa needs to make an effective impact. The redefinition of counselling psychology in South Africa is

described within a national and international context for the profession. In particular, the issue of contextualising a definition of counselling psychology against the pressing needs of a developing nation is considered. This national comparison needs to be considered against the developing international literature on the redefining of counselling psychology, as well as the similarities and differences in such redefinition that occur within different national contexts. The symposium would provide a platform for such a comparison.

Keywords: counselling psychology, South Africa, socio-political climate, professional board, developing nation

Psychoactive drugs, psychobiological health and well-being

Chair(s): PARROTT, A. (Swansea University),
SCHOLEY, A. (Swinburne University)

Discussant(s): STOUGH, C. (Swinburne University)

Psychoactive drugs are consumed for a range of reasons. Many are legal compounds while others are illicit. Herbal preparations are taken for their pro-health properties, sedative compounds can engender feelings of relaxation, while stimulants are taken for euphoria and excitement. Young people are particularly at risk from stimulant drug abuse, while alcohol, nicotine, and caffeine are taken worldwide. Gender effects will also be debated. With most drugs the 'target' effects are accompanied by a range of unwanted 'side' effects. Some of these health and behavioural effects are readily apparent, whereas others are more subtle, and can only be revealed through sensitive assessment devices. Using these sophisticated tools, subtle changes in psychobiological integrity can be demonstrated following very low doses. The first aim of this symposium will be to summarize the wide range of drugs used by humans, and outline their various effects on human health and behaviour. The second aim will be to illustrate the broad range of applied psychobiological tools which have been developed to detect these effects. Neuroscience measures such as fMRI have allowed the identification of particular brain regions affected by cannabis. Cognitive test batteries have become extremely sensitive, and they can reveal subtle changes in memory and cognition following low dosage levels. EEG measures have revealed localized deficits in Ecstasy users performing a memory task, before memory deficits are behaviorally apparent. Immunocompetence can be compromised by various drugs, often accompanied by changes in the HPA axis. The use of the Internet for large population studies will also be described, with their benefits and drawbacks being debated. Each paper will focus on a particular drug type/group. However since humans often use

multiple drugs, the practical effects of polydrug combinations will also be illustrated. The learning objectives of this symposium will include a greater understanding of the effects of drugs such as cannabis, cocaine, alcohol, nicotine/tobacco, caffeine, ginkgo, and ginseng on human behaviour and well-being, a greater understanding of the range of tests for assessing core psychobiological functions, health, and well-being, and a greater understanding of the dynamic complexity of polydrug interactions.

Cannabis and the brain: cognitive and psychological function in adults and adolescents

SOLOWIJ, N. (Wollongong University)

There has been growing recognition that cannabis may adversely affect, particularly in relation to the development of psychosis. There are also risks to the developing brain when cannabis is used during adolescence. Over recent years, a range of applied tools have been used in studies to investigate the effects of cannabis on brain and psychological function. This paper will provide an overview of hot topics in this area. Recent studies have utilised neuroimaging techniques (structural and functional), neuropsychological tests, electrophysiological assessment, genotyping, clinical measures and prospective methods to examine psychological functioning in adult and adolescent cannabis users. Key papers will be presented and discussed. The evidence from recent research suggests that cannabis is not the benign drug it was once thought to be. Long-term heavy cannabis use results in memory impairment, structural alterations in the brain, and induction of subclinical psychotic symptoms. Cannabis is now considered to be a component cause of schizophrenia, interacting with genetic and other predispositions to precipitate the onset of the disorder in vulnerable individuals. There is evidence that its adverse effects may be greater in adolescents who use cannabis. Cannabis is not commonly used in isolation, and the effects of alcohol in particular, will be discussed in the context of effects of long-term cannabis use. A wide range of research tools may be applied to assess the impact of cannabis on the brain and on psychological

function and well-being. These multidisciplinary approaches can combine to provide a detailed understanding of the effects of cannabis and the resultant knowledge can inform policy, education and prevention strategies as well as treatment and interventions for clinical samples of cannabis users and people with or at risk of developing schizophrenia.

Keywords: *cannabis, schizophrenia, alcohol, psychological function*

Positive psychoactive effects of Ginseng

SCHOLEY, A. (Swinburne University)

Over the past decade or so there has been an increasing number of studies examining the biobehavioural effects of administration of plant extracts to humans. Many of these have revealed properties which may be applicable to various psychological disorders ranging from workplace stress to dementia. The plant extracts include some which have been used for millennia in traditional European, Chinese and Ayurvedic medicine systems. This paper will briefly review empirical evidence for the efficacy of species of Ginseng to improve mood and neurocognitive function in the laboratory. A series of randomised, double-blind, placebo-controlled trials have been conducted in several populations aimed at evaluating the mood and cognitive effects of standardized extracts of *Panax ginseng* (Asian ginseng) and *Panax quinquefolius* (American ginseng). Earlier studies included standardised test batteries and mood measures, while further investigations were aimed at disentangling the cognitive structures targeted by each extract. The data reveal that both Asian and American Ginseng acutely improve memory function. This improvement includes benefits to working memory, an effect supported by reduced P300 latency in EEG/event-related potential studies. The two extracts' effects can also be differentiated based on their neurocognitive profile; specifically American ginseng differentially improves attention and increases self-rated calmness while Asian ginseng enhances secondary memory performance. It was concluded that extracts of ginseng are capable of modulating mood and cognition. Interestingly their differential effects are

largely consistent with their traditional use. At a mechanistic level the effects may be related to differential glycaemic effects of individual ginsenosides. Future studies might usefully be directed at determining the extent to which Ginseng and similar natural products are capable of reversing cognitive deficits associated with pathological disorders and long-term drug use.

Keywords: *Ginseng, Memory function, working memory, cognitive deficits, drug use*

Gender variation in response to stress and drug cues in cocaine dependent and alcohol dependent individuals

FOX, H. (Yale University)

Cocaine and alcohol dependence are both characterized by robust stress and reward system dysregulation, which not only underlies the development of dependence and addiction, but is also gender-specific. These neuroadaptations to stress and reward system function in cocaine dependent (CD) and alcohol dependent (AD) men and women have been assessed using a wide range of psychobiological tools, including clinical assessments, physiological measures, neuroendocrine markers and selective neurocognitive tests. The following paper outlines studies that have assessed gender variation in emotional, physiological, neuroendocrine and cognitive response to the stress and drug-cues in CD and AD patients. A series of studies will be presented where early abstinent CD and AD men and women are exposed to stress and drug-cue related personalized guided imagery scenarios. Cocaine and alcohol craving assessments are collected as well as various indices of stress system response at baseline, immediately following imagery and at various recovery time-points. Measures include subjective ratings (cocaine/ alcohol craving, anxiety, mood) physiological measures (heart rate and blood pressure) neuroendocrine markers (ACTH, Cortisol, norepinephrine and epinephrine) and cognitive measures (stroop, RAVLT). Findings from various studies broadly indicate that increases in stress and cue-induced craving are accompanied by significantly different changes in ACTH,

cortisol, NE, EPI, anxiety, mood and cognition between substance abusing men and substance abusing women. As these stress-system changes are associated with relapse factors in both CD and AD populations, this variation has important implications for the development of gender-specific treatments. Findings highlight how different psychobiological measures may vary between CD men and women with regard to predicting relapse vulnerability (craving) and treatment outcome. This emphasizes the need for the application of a wide range of psychobiological tools and research paradigms when addressing gender variation in addictive populations.

Keywords: *cocaine, alcohol, gender, craving, addiction*

Cigarette smoking: real world studies into the psychobiological effects of nicotine dependency

PARROTT, A. (Swansea University)

In laboratory studies, it is often unclear whether nicotine improves psychobiological functioning, or whether the apparent benefits only reflect the reversal of nicotine-withdrawal effects. In order to empirically investigate this conundrum, the effects of nicotine-withdrawal and nicotine-reinstatement were empirically investigated with everyday smokers in the real world. A 12 year programme of real world studies was undertaken, where cigarette smokers were monitored as they followed their normal daily activities. Psychological measures of mood and cognition were taken before and after each incidence of cigarette smoking. This allowed the effects of nicotine and withdrawal to be routinely measured. In some studies, cigarettes were smoked 'ad libitum'. In others, smokers abstained for a defined period of time, before smoking their cigarettes again. Cognitive tests of memory and attention were employed in several studies. The latter studies involved Internet sampling. Prospective 'real time' measures were also employed, education leaflets were developed, and a smoking cessation clinic was established. In every study, smokers' psychological status was markedly impaired by nicotine deprivation, with significant impairments in stress, alertness, depression,

and cognition. Nicotine restoration then led to improvements in all these functions. However crucially, performance following nicotine reinstatement was at normal levels. Hence there was no evidence for any true psychobiological gains with nicotine. Furthermore, in unrestrained smokers, average daily performance was often worse than non-smokers. Indeed regular smokers reported significantly higher stress and depression, and worse memories, than non-smoker controls. This is probably due to repeated experience of negative moods, and information processing difficulties, in between cigarettes. The mood and cognitive effects of co-drugs such as caffeine and alcohol, in dependent tobacco smokers, will also be briefly noted and debated. It was concluded that cigarette smoking causes a wide range of psychobiological deficits. These are associated with the regular and cyclical experience of unpleasant nicotine-withdrawal phenomena. When smokers were informed of this explanatory model, using a brief information leaflet, attitudes and knowledge about nicotine dependency and cigarette usage improved markedly. These same leaflets may also help to improve the success rates of smoking cessation programmes.

Keywords: *nicotine, cigarette smoking, smoking, nicotine*

Psychoeducation to assist couple relationships and parenting

Chair(s): HALFORD, K. (University of Queensland)

This symposium presents a series of four papers that seek to enhance couples' relationship adjustment, individual psychological well being and their parenting adjustment. Each paper describes an evaluation of an evidence based psycho-educational intervention that promotes resilience and focuses on couples in committed relationships, and seeks to make such programs available in a cost effective manner. All of the four papers address the needs of couples either making the transition to parenthood, or adjusting to parenthood in the face of challenges. The first paper describes two randomized controlled trials evaluating a brief education intervention for women at risk of post-natal depression. The second paper describes a randomized controlled trial of a couple-focused program entitled Couple CARE for parents. The third paper describes an ongoing longitudinal evaluation of a couple-focused intervention for low income families with young children. The final paper describes a replication and extension of a previous trial of Couple CARE for Parents in which the program was delivered by midwives. A common integrating theme across the presentations is that brief psychoeducational interventions can significantly enhance individual and couple's psychological adjustment. The learning objectives are: 1) to describe the psychological challenges confronting couples becoming parents, and how psychoeducational programs can assist couples to co-parent successfully, and 2) to analyze the available evidence on the efficacy, effectiveness and cost-effectiveness of these psychoeducational interventions.

Towards parenthood - a public health intervention to prepare for the changes and challenges of a new baby

MILGROM, J. (University of Melbourne and Parent-Infant Research Institute, Austin Health)

This antenatal intervention was designed to prevent early parenting difficulties and minimize the impact of mood disorders in women at low and high risk of depression. It was created to address the needs of a broad population of women serviced by public maternity hospitals as a self-directed guidebook supported by telephone calls. The intervention targets were selected the basis of clinical wisdom and an exhaustive empirical review of risk factors impacting on parenting outcomes. An extensive review of existing local and international parenting support programs was also conducted. Focus groups and pilot studies were conducted to confirm acceptability. Expectant mothers and their partners received self-directed learning guidebook comprising of six units addressing the following issues: transition to parenthood, partner difficulties, coping with a life stress, family of origin experiences, antenatal attachment to fetus, practical parenting skills. Fortnightly phone calls from a psychologist were provided to monitor compliance and engagement with content. The format included interactive exercises, partner involvement and cartoons. Two randomized controlled trials were conducted to compare women at risk of antenatal depression receiving the intervention with those who did not, on a range of questionnaires including the Beck Depression Inventory (BDI) and the Parenting Stress Index. Partners were also included. A similar comparison was made for non-depressed women. In the initial study, 200 women were randomized and effectiveness of the program was demonstrated despite low compliance with telephone sessions. Women from 32 weeks gestation and their partners were involved. Changes on the Beck Depression Inventory and Parenting Stress Index were found. Refinements of the intervention to increase compliance was followed by a second evaluation ($n = 150$) and intervention benefits for both depressed and non-depressed women were found, with largest changes in BDI score the higher the score at entry. Parenting stress also decreased and partners self-rated as less depressed and stressed in the postnatal period. Self directed minimal intervention in the antenatal period is a useful health intervention for women at risk of antenatal depression.

Keywords: *parenthood, mood disorders, women, depression, interventions*

Promoting a positive transition to parenthood: A randomized clinical trial of couple relationship education

PETCH, J. (University of Queensland)

The transition to parenthood is often associated with a decline in couple relationship adjustment. The current study evaluated the Couple CARE for parents program, an innovative couple focused program for couples expecting their first child. Couples ($n = 71$) expecting their first child were randomly assigned to either: (a) Becoming a Parent (BAP), a maternal parenting education program; or (b) Couple CARE for Parents (CCP), a couple relationship and parenting education program. Couples were assessed pre-intervention (last trimester of pregnancy), post-intervention (5 months postpartum), and follow-up (12 months postpartum). Relative to BAP, CCP reduced negative couple communication from pre- to post-intervention, and prevented erosion of relationship adjustment and self-regulation in women but not men from pre-intervention to follow-up. Mean parenting stress reflected positive adjustment to parenthood with no differences between BAP and CCP. CCP shows promise as a brief program that can enhance couple communication and women's adjustment to parenthood. However, its cost effectiveness relative to other potential modes of supporting new parents needs to be investigated.

Keywords: *transition, parenthood, relationship adjustment, parents program, communication*

The PREP program for low-income couples with children: Preliminary results from a randomized clinical trial.

MARKMAN, H. (Denver University)

Maintaining a healthy and stable relationship under ideal circumstances is challenging. This difficulty is compounded when couples are under economic stress. Teaching at risk couples skills and principles for a successful relationship can increase relationship and family stability and improve adult well-being.

Current relationship education programs positively affect marital and relationship quality. However, these programs have primarily been offered to white, middle-class couples. There is a strong need to develop and evaluate relationship education programs for ethnically diverse groups of low-income couples and individuals. The current paper presents the preliminary of results of an ongoing longitudinal study (called FRAME, Fatherhood, Relationship and Marriage Education Program) of low income couples who are in committed relationships and caring for at least one child together. Two hundred and fifty couples were randomly assigned to one of our conditions: one of three versions of the PREP program that we have developed for low income couples and individuals (traditional couples group, group for male partners, and group for female partners) or a control condition. Participants in the PREP intervention conditions attended an 18 hour workshop. We hypothesized that when compared to control couples, intervention couples would report significant gains in relationship variables and overall relationship satisfaction. We further hypothesized that participants who receive the intervention in the couples group would report relationship gains greater than those made in the individual male and female groups. The modified PREP programs teach skills for creating and maintaining healthy relationships, to cope with stress, and to enhance parenting skills. Participants completed pre, post, and follow up (up to 3 years after the intervention) self-report questionnaires designed to measure relationship quality, coping with stress, parenting, and child adjustment. Preliminary analyses revealed significant effects for relationship quality, parenting and child outcomes for all intervention groups. In addition, when only one person attends the intervention, the other partner and the relationship improves. Thus, as the couple relationship can be enhanced even when only one partner attends, suggesting a transfer effect that argues for having only person in the room when the other cannot or will not attend. Principles of how to disseminate the program on a population wide basis will be described, drawing on our work with other populations (foster parents, prisons, religious organizations, the military).

Keywords: *relationship, economic stress, family stability, well-being, education*

Evaluation of midwife-delivered couple psychoducation to enhance couples' relationships and adjustment to parenthood

HALFORD, K. (University of Queensland)

Couple relationship education (CRE) for the transition to parenthood shows promise in preventing relationship distress and couple communication negativity commonly observed among couples becoming parents. However, incorporating such programs into routine care is likely to necessitate program implementation by those who provide much of the antenatal and post natal care. The current study evaluated the effects of training midwives to deliver the Couple CARE for Parents program. Nine midwife educators were trained and supervised in the delivery of the Couple CARE for Parents (CCP) which in a prior evaluation prevented relationship maladjustment when delivered by a psychologist. Couples ($n = 263$) expecting their first child were randomly assigned to either: (a) Becoming a Parent (BAP), a maternal parenting education program; or (b) Couple CARE for Parents (CCP), a couple relationship and parenting education program. Couples were assessed pre-intervention (last trimester of pregnancy), post-intervention (4 months postpartum), and at follow-up (16 and 28 months postpartum). Consistent with the previous study, relative to BAP, CPP significantly enhanced couple communication. Results from the current and the psychologist-delivered CCP trial will be compared. Midwives can successfully deliver most elements of a brief psychoeducational program for expectant parents. The implications for future dissemination of the program will.

Keywords: *couple relationship education, transition, parenthood, relationship distress, midwives*

Psychological and demographic factors influencing rider behaviour and accident risk among Australian motorcycle riders

Chair(s): ZINKIEWICZ, L. (School of Psychology, Deakin University)

Discussant(s): WIG, P. (School of Psychology, Deakin University)

As is well established in the international road safety literature (Harrison & Christie, 2005), motorcyclists are overrepresented in road injury and mortality statistics. However, although considerable research has been conducted to understand factors contributing to motorcycle accidents, the majority of this research has focused upon the role of machine and environmental factors in motorcycling accidents (Elliott, Baughan, & Sexton, 2007). Of the little human factors research, the focus has been on rider demographics rather than on psychological and behavioural characteristics that may influence accident risk (Elliott et al., 2007). However, increasing interest has arisen in the role of psychological factors and riding behaviour in explaining accident likelihood. This symposium begins with a quick introduction to the literature on psychological factors and riding behaviour, then moves to four motorcycling studies recently conducted in Australia, all of which have successfully used Elliott et al.'s recently developed (2007) Motorcycle Rider Behaviour Questionnaire to measure riding behaviour. While the first study focuses on demographic differences in riding behaviour, the following three studies look at psychological variables hitherto unexplored in relation to motorcycle riding: territorial perceptions, gender roles, and psychological need for control. The symposium concludes with concluding and summarising remarks by a discussant, and an opportunity to ask questions of presenters. The key learning objectives of the symposium are: To demonstrate the utility of the Motorcycle Rider

Behaviour Questionnaire in the Australian context; To illustrate the contribution of psychological variables to an understanding of motorcycle rider; behaviour and accident involvement; and to highlight the value of the internet in collecting data from Australian motorcyclists.

Testing the Motorcycle Rider Behaviour Questionnaire with Australian Motorcyclists

GOOK, L. (School of Psychology, Deakin University), MCKENNA, A. (School of Psychology, Deakin University), WIG, P. (School of Psychology, Deakin University)

The study aimed to test the utility of the recently-developed Motorcycle Rider Behaviour Questionnaire (MRBQ) (Elliott et al., 2007), developed in the UK, in an Australian context, and to investigate age, region and gender differences in riding behaviour as measured by the MRBQ. An online questionnaire was completed by 1365 motorcycle riders (195 women and 1168 men) from across Australia. This included the MRBQ, demographic items (including gender, age, and region lived and ridden in), and measures of involvement in both active accidents (where the rider was at least partly to blame) and passive accidents (where the rider was hit by another road user). Confirmatory factor analysis of the MRBQ revealed a similar factor structure to that emerging in Elliott et al.'s UK sample, with five factors again emerging: traffic errors, speeding, stunting, safety equipment wearing, and control errors. Riders living and riding in urban areas reported significantly greater speeding than did those in regional areas. Male riders performed more stunts and wore less safety equipment than did female riders, with younger male riders performing more stunts and wearing less safety equipment than did older male riders. Younger male riders also had more involvement in both active (blame) crashes and passive crashes than did older male riders. Traffic errors and stunting increased the odds of any accident involvement, with age, living in a regional area, and safety equipment wearing protective factors. Only control errors increased the odds of active accident

involvement, with age again a protective factor, while age, region, safety equipment, and (unexpectedly) control errors reducing the odds of passive accident involvement. Results were fairly consistent with those of Elliott et al. (2007) in relation to predictors of total accident involvement, with fewer predictors emerging in relation to active accident involvement. It was concluded that the MRBQ may be a useful tool to assess motorcycle rider behaviour within the Australian context.

Keywords: *Motorcycle Rider Behaviour Questionnaire, gender differences, age, traffic errors, speeding*

Gender role influences on risky motorcycle riding behaviour among Australian motorcycle riders

MCKENNA, A. (School of Psychology, Deakin University), O'SULLIVAN, A. (School of Psychology, Deakin University)

While research has established that male motorcycle riders are involved in more accidents, and engage in more risky riding behaviour, than female riders, why this is the case is unclear. The study investigated the hitherto unexplored possibility that such gender differences may be due to the effects of gender roles on riding behaviour. 1365 licensed Australian motorcyclists completed an online questionnaire, with riding behaviour measured using the Motorcycle Rider Behaviour Questionnaire (Elliott et al., 2007) and gender roles measured using the Bem (1974) Sex-Role Inventory short form. Those engaging in the more risky riding behaviours of speeding and stunts had higher levels of masculinity than those engaging in less speeding and stunting, while those engaging in less speeding and stunting and more use of safety equipment had higher levels of femininity. Logistic regression analyses using gender roles, experience and motorcycle riding behaviours as predictors of accident involvement revealed that the strongest predictors of total accident involvement were traffic errors, speeding and stunting, with safety equipment and experience reducing the odds of accident involvement. The strongest predictors of active accident involvement were control errors and speeding, with experience

and masculinity reducing the odds. The odds of being in a passive accident were reduced by age, femininity, safety equipment and (unexpectedly) control errors. When controlling for the effects of gender role, gender did not predict accident involvement, contradictory to previous motorcycling studies. When gender role and riding behaviour were taken into account, gender per se had little relationship to motorcycling accident involvement. Instead, results suggest that the effects of gender on accident involvement may be due to the effect of gender roles, which may play both a direct and indirect role in specific types of motorcycling accidents. However, while femininity appears to be protective in relation to riding behaviour and accident risk, masculinity's role is less straightforward, with masculinity associated with more risky riding behaviour but also protective in relation to active accidents. Further research is required to clarify these findings, and to investigate the possible protective role of androgyny in relation to motorcycle riding.

Keywords: *males, motorcycle riders, accidents, risky riding behaviour, gender differences*

Territorial perceptions of the motorcycle, risky rider behaviour and accident risk among Australian motorcycle riders

MITCHELL, J. (School of Psychology, Deakin University)

Fraine (2003; Fraine et al., 2007) found that car drivers who showed strong territorial relationships with their vehicle – that is, saw their car as a primary territory, similar to the home – were more likely to engage in risky driving behaviours. In order to determine whether a similar relationship existed for motorcycle riders, the present study investigated whether the motorcycle was seen in territorial terms, and the influence of such perceptions on rider behaviour and accident involvement. The sample comprised 1361 Australian licensed motorcyclists, 1166 men and 193 women, who completed the Motorcycle Rider Behaviour Questionnaire (Elliott et al., 2007), and measures of territorial perceptions of the motorcycle derived from measures used by Fraine (2003). Principal components analysis of the territoriality items

revealed that motorcyclists perceived their motorcycle as a territory, with seven components emerging: rider autonomy, motorcycle centrality, negatives of riding, motorcycle as essential, threat from other road users, motorcycle as defensible space, and identity communication. Stronger territorial perceptions emerged in younger riders. ANOVA conducted on reliable territorial components showed that stronger territorial perceptions of the motorcycle were associated with more risky riding behaviour, with perception of the motorcycle as defensible space the strongest predictor of risky riding behaviour. Binary logistical regression showed that, for accidents in which the rider accepted some blame, age was a protective factor for, and control errors increased the odds of, accident involvement, but that territorial perceptions did not predict accident involvement. Motorcyclists' perceptions of their motorcycles were related to the territorial dimensions of centrality and bike as defensible space, along with the territorial themes of autonomy, and threat when intrusion is perceived. For accidents where the rider has accepted a degree of culpability, control errors were found to be predictive of increased accident involvement. Finally, those engaging in more risky riding behaviours had in general, stronger territorial perceptions of their motorcycle.

Keywords: *territorial perceptions, motorcycle, risky riding behaviour, accident risk, autonomy*

Psychological desire for control and Australian motorcyclists' accident involvement

GERLACH, K. (School of Psychology, Deakin University)

In order to expand our knowledge of causal factors involved in motorcycle crashes, the current study explored the relationship between psychological desire for control (DC), riding behaviours (as measured by the Motorcycle Rider Behaviour Questionnaire, MRBQ), key demographic variables, sensation seeking (SS) and accident involvement. A total of 766 Australian motorcyclists who had ridden within the past 24 months (700 men and 64 women) responded to the online

questionnaire. Results revealed that men and women, and those who reported using safety equipment more often compared to those using it less often, did not differ significantly in their levels of DC. However, higher levels of DC were found in those reporting lower levels of traffic and control errors and higher levels of speeding violations and stunting. Binary logistic regression analyses revealed that control errors significantly increased the odds of a rider being involved in any accident and in active accidents, while greater DC and experience significantly decreased the odds of active accident involvement, and greater age decreased the odds of passive accident involvement. Consistent with previous research, SS did not predict accident involvement. It is suggested that the seeming contradiction between DC as a protective factor in relation to active accidents, and its association with higher levels of speeding and stunting, may be due to these risky behaviours serving a purpose in making motorcyclists more skilful and safer riders. However, more research is needed to verify this suggestion.

Keywords: *motorcycle, desire for control, riding behaviours, sensation seeking, accident involvement*

Psychological approach to entrepreneurial success and innovation

Chair(s): GORGIEVSKI, M. (Erasmus University Rotterdam)

Discussant(s): UHLANER, L. (Nijenrode Business University)

Recognition of the importance of entrepreneurship for social and economic well-being leads to the question of how we can develop entrepreneurial potential (e.g., GEM, 2006). Traditionally, developing potential at work has been the field of Work and Organisational Psychology. However, in entrepreneurship research to date, psychology has played a very modest role. Undeservedly, because it has much to offer as it comes to explaining entrepreneurs' behaviour. This symposium aims at providing insight into the multidimensional nature of entrepreneurial performance, its measurement, and its possible predictors. Research methods are diverse, ranging from qualitative in-depth designs to cross-cultural and multi-level quantitative survey designs. Five researchers will share with you their current, novel work on diverse topics related to different success outcomes, ranging from (subjective) economic success to company-wide innovation and quality of working of employees. The first presenter provides a broad definition of entrepreneurial success, and reports on the psychometric qualities of a new multifaceted subjective entrepreneurial success measurement instrument. The second presenter will show the results of a cross-cultural validation of another new, company level measurement instrument: the Innovative Behaviour Inventory and Innovation Support Inventory. In addition, he will provide qualitative, in depth insight into national cultural differences in how to support innovative behaviour at work. Taking a social dynamics perspective, the third presenter will show how ownership social capital (quality of relationships amongst a team of owners) influences subjective economic business success. The fourth presenter

will examine how entrepreneurs' self-management styles influence employees' job characteristics, in particular job control and active job situations as reported by employees. Finally, the fifth presenter will report on the relationships between on the one hand entrepreneurs' psychological capital, work engagement and flourishing and on the other hand innovation on the personal and company level, and economic business results. Finally, the presentations will be critically reviewed by a discussant, who will start the general discussion with the audience.

Entrepreneurial success is multidimensional: Development and validation of subjective Success Scale

DEJ, D. (Technical University Dresden)

Although research indicates that subjective criteria may be better predictors of entrepreneurs' decisions and subsequent behaviors, such as business closure, than objective entrepreneurial success criteria (e.g., company growth and financial performance), entrepreneurial success as perceived by entrepreneurs themselves has largely been neglected in the entrepreneurship literature. The goal of this study was to explore success as defined by entrepreneurs themselves and to develop and validate a scale that captures subjective perceptions of success. We hypothesized that entrepreneurs' personal definitions of success will include manifold financial and non-financial aspects, and that the developed scale will reflect the multidimensional nature of success. We also hypothesized that achievement of important success criteria will be negatively associated with vital exhaustion and positively related to job and life satisfaction as well as to objective firm performance. Content analysis has been applied to explore definitions of success provided by 243 German and Polish business owners-managers. Based on the attained results, we developed a 5-factor Subjective Entrepreneurial Success Scale (SESS) and distributed it to 186 German entrepreneurs. Scale validity was established using structural equation modelling and establishing a nomological network of relationships. Qualitative results revealed that entrepreneurs

define success in terms of (1) company performance, (2) personal financial rewards, (3) workplace relations, (4) community impact and (5) personal fulfilment. Confirmatory factor analysis supported a 5-factor structure of the SESS (CMIN/DF = 1.69, $p < .001$, RMSEA = .06, CFI = .90). Scale reliabilities were satisfactory. Subjective entrepreneurial success correlated positively with job and life satisfaction, creativity and innovation and explained 13 % of variance in vital exhaustion after controlling for age and gender. In addition, the subscale (1) "company performance" related positively to employee growth while (2) "personal rewards" was associated with entrepreneurs' annual income. No relationships were found with firm profit and revenue growth. This study contributes to entrepreneurship research by demonstrating that success goes far beyond objective financial performance. Entrepreneurs' reports of success definitions include categories that are usually not elicited in entrepreneurship research. Furthermore, the results suggest that the proposed scale is a valid and useful instrument that captures these perceptions of success.

Keywords: entrepreneurial success, entrepreneurship, scale, perceptions, life satisfaction

Innovative behaviour of individuals and its support: The views from seven European and Asian cultures

LUKES, M. (Prague University of Economics)

This study has two aims based on a recently developed theoretical model of innovation at work, consisting of innovative behaviour, innovation outputs, and contextual determinants of innovative behaviour (including managerial, organizational and cultural support). The first aim is to cross-culturally validate the Innovative Behaviour Inventory and the Innovation Support Inventory in Eurasian cultures. The second aim is to get qualitative views on the topic from managers in different countries who are responsible for continuous improvement in their companies. The Innovative Behaviour Inventory and Innovation Support Inventory (35 items; Lukes, Stephan & Cernikova, 2009)

was used on four representative samples of adult populations ($N=2744$) in Switzerland, Germany, Italy, and the Czech Republic. Reliability, factorial validity and criterion, convergent, discriminant and cross-cultural validity was assessed by using Cronbach's alphas, confirmatory factor analysis, analysis of variance, correlation analysis, and measurement invariance tests. We also used the sample of $N=188$ employees of Russian, Chinese, and Indian subsidiaries of a multinational automotive company in order to investigate further cross-cultural validity. We additionally conducted semi-structured interviews with managers in four countries ($N=61$) to gain in depth information on predictors of employee innovation efforts in their companies. Both inventories are reliable and valid in European and Asian cultures. Innovative behaviour at work is conceptualized as a second-order factor that is composed of idea generation, idea search and idea communication, implementation starting activities, involving others, and overcoming obstacles. Innovative behaviour is connected to innovation outputs and is directly influenced by manager's support that also mediates the role of organizational and cultural support. Interviews with managers illustrated cultural specifics in the continuous improvement management, e.g. importance of nonmonetary appreciation and non-linear work approach of employees in India, hardworking approach and stronger monetary focus of employees in China or the relative passivity and dependence on manager's decisions in Russia. The study adds the value to our understanding of multi-faceted innovation process and factors influencing it and provides efficient measures enabling to identify company strengths and weaknesses related to employee innovative behaviours. It also provides new knowledge concerning national cultural differences in innovative behaviour and its support.

Keywords: innovative behaviour, Innovative Behaviour Inventory, Innovation Support Inventory, Eurasian cultures, cultural diversity

Ownership social capital and firm performance in the private firm: Evidence from a Dutch sample

BERENT-BRAUN, M. (Nijenrode Business University)

This study applies the concept of organizational social capital to the ownership group in private firms. Extant research focuses primarily on the type or structure of ownership to predict various firm effects. However, especially in the private firm, owners are individual actors whose attitudes and behaviors play an integral role in the firm's performance. Where multiple owners are involved, (which is the case in approximately half of all start-ups and established firms), the understanding of dynamics amongst the owning group becomes essential. Building on the group literature in social and organization psychology, we examine this problem. We use the term, ownership social capital, to represent the quality of relationships amongst owners, analogous to the concept of organizational social capital (Leana & van Buren, 1999) used in the field of organization behavior to describe the quality of employee relationships. The key research question in the present study is: how does ownership social capital affect business performance? Specifically, we examine how trust and associability (willingness to subordinate individual goals to group goals) influence subjective financial performance of the business. Data was collected in 2008 via key informant telephone interviews with the director from a random stratified sample of 810 Dutch private companies. We analyzed data using OLS hierarchical regression analysis. In the overall model, in addition to firm characteristics (including size and sector) we control for aspects of ownership structure, such as number of individual owners, and family orientation. Possible moderator effects are also explored. Initial results indicate that in the overall sample, associability is a better predictor than trust of subjective financial performance. However, we find a significant interaction between trust and family orientation such that in firms with low family orientation, trust is a positive predictor of performance in contrast with those with a high family orientation, for which trust has little or no added explanatory effect. Increasing our understanding of the social dynamics among business owning groups is a fruitful new avenue if we want to increase our understanding of business success.

Keywords: *organizational social capital, firm performance, private firm, attitudes*

Entrepreneurs' self-management style influences their employees' job characteristics

STEPHAN, U. (Katholieke Universiteit Leuven)

Entrepreneurs in small and medium-sized enterprises (SMEs) are understood to create and influence the work environment of their employees. The present research examines how entrepreneurs' self-management styles influence employees' job characteristics. We examine job characteristics building on the job control demand model, for which prior research highlights the positive consequences of high job control/active job (vs. high job demand/job strain) for employees' health, well-being, learning and motivation. In this multi-level study, we investigate two self-management styles of entrepreneurs, which prior studies found to predict enterprise success: proactive planning and opportunistic strategy. Proactive planning is a systematic approach to work in which plans are devised based on a thorough analysis of the work situation and in anticipation of future developments. Due to their structured approach to work, proactively planning entrepreneurs are likely to be able to delegate entire tasks to employees in line with their skills thereby enhancing employees' job control. Opportunistic strategy is characterized by high situational responsiveness as the entrepreneur continuously interrupts his plans to take advantage of potential situational opportunities. Since frequent changes are likely to result in shifting and demanding requests upon the employees, we hypothesized that opportunistic strategy will lead to increased job demands. The sample consisted of 550 employees from 44 German SMEs operating in the information technology and gastronomy industries. Entrepreneurs' self-management style was captured with the Action Strategy Questionnaire (Zempel, 2003). Employees rated their job characteristics using the Job Content Questionnaire (Karasek et al., 1998). Hypotheses were tested with cross-level operator analysis (CLOP, James & Williams, 2000). All analyses controlled for socio-demographic variables and firm characteristics

(e.g. firm age, size). Entrepreneurs' self-management style significantly influences employees' perception of job characteristics. As hypothesized entrepreneurs' proactive planning is associated with higher job control and an active job situation for employees; and an opportunistic strategy with the perception of higher job demands and job strain. The present study provides evidence that entrepreneurs' self-management styles influences employees' perception of job characteristics. Thus training entrepreneurs' especially in using proactive planning could influence their employee's well-being and productivity by way of their job characteristics.

Keywords: *entrepreneurship, self-management, employees, job control demand model, proactive planning*

Entrepreneurs' psychological capital, innovativeness and business performance

GORGIEVSKI, M. (Erasmus University Rotterdam)

Predicting entrepreneurial performance and business success remains relevant in entrepreneurship research as well as work and organizational psychology. Concerning the performance of self-employed people, the individual difference approach has prevailed to date, focusing on stable personal characteristics (e.g., Rauch & Frese, 2007, 2008). Building on positive psychology, the current study aims to take this research one step further, by investigating relationships between on the one hand entrepreneurs' psychological capital, work engagement and flourishing and on the other hand business outcomes (innovativeness and company growth) through individual behavior (development at work and innovative behavior). Business owners ($N=102$) participated in a web based survey (response rate 29%). Constructs were measured using previously developed and validated scales. On the individual level these addressed psychological capital: self-efficacy (4 items, $\alpha = .93$), optimism (3 items, $\alpha = .69$), self-esteem (5 items, $\alpha = .67$) and resilience (5 items, $\alpha = .80$); work-engagement (9 items, $\alpha = .92$); flourishing (11 items, $\alpha = .77$); business owners' innovative behaviour (6 items, $\alpha = .90$);

and learning at work (11 items, $\alpha = .92$). On the firm level these were entrepreneurs' reports of firm financial growth (4 items, $\alpha = .89$); company level innovative strategy and resources (7 items, $\alpha = .91$) and the percentage of profit derived from new products. Data were analysed using structural equation modelling. Business owners' self-efficacy, resilience, and flourishing predicted learning at work and innovative behaviour. Optimism, self-esteem and work engagement did not predict additional variance. In turn, business owners' learning at work and innovative behaviour predicted self-reported financial growth of the business. Business owners' innovative behaviour also predicted the percentage of profit related to new products. The firms' innovative strategy and resources were not predicted by innovative behaviour and learning, but related directly to flourishing. In line with previous studies showing the importance of entrepreneurs' well-being and harmonious passion for work, this study shows that flourishing is an important concept which is directly and indirectly related to company performance. This once more underscores that a balanced and optimal well-being is key to entrepreneurial success.

Keywords: *entrepreneurial performance, business success, psychological capital, work engagement, entrepreneurial success*

Psychological approaches to aging-well

Chair(s): PAÚL, C. (UNIFAI/ICBAS-UP)

Discussant(s): PAÚL, C. (UNIFAI/ICBAS-UP)

Psychology, as a science and as a profession should have a much more important role in the field of gerontology, now mostly dominated by social and health issues. Psychology is very important to a deep understanding of the aging process and the implementation of services for old people, contributing decisively to all the three priority areas considered by the Madrid International Plan of Action on Aging: i) Aging and development; ii) Advancing health and well-being and iii) Ensuring enabling and supportive environments. In a first paper Paúl et al, after discussing a protocol to assess active aging, show the relevance of psychological determinants to active ageing. Analyzing age differences in a community based sample Ribeiro et al show how the variables associated to active aging vary with different cohorts, particularly in very old people. Also based on the WHO Active Ageing framework Browning et al examined the role of culture and gender in conceptualizations of healthy ageing and examine implications for the design of programs for older people to support healthy ageing. Social support is, according to McLaughlin et al, an important factor in maintaining health and well-being for older adults. Based on Carstensen's socioemotional selectivity theory that proposes that older adults actively prune their social networks to maintain optimal support in the face of limitations such as physical declines, the authors show that poor mental health and sensory impairments were associated with smaller networks and lower satisfaction with support for both men and women. Finally Lima shows the relevance of group intervention (counselling and psychotherapy) with older clients in response to challenges faced by older adults in later life, benefiting people living either in individual or institutional settings. This symposium aims to focusing attention on aging issues illustrating different contributions of

psychology to gerontology in the framework of Active Aging model (WHO, 2002), main psychological theories of aging (e.g. Carstensen's socioemotional selectivity theory) and counseling and psychotherapy.

Psychological determinants of active ageing

PAÚL, C. (UNIFAI/ICBAS-UP)

Active Ageing is a process of optimization of the opportunities for health, participation and security, to increase quality of life during the process of aging (WHO, 2002). The WHO Active Aging Model comprises 6 groups of determinants Physical Environment; Social Determinants, Economic Determinants, Health and Social Services; Behavior Determinants and Personal Determinants, embedded in culture and gender. The objective of our research was i) to operationalize the concept of active aging by means of a protocol to measure which variables contribute the most for an active ageing process and ii) to be able to obtain a profile of individuals that consistently tells us which areas are in debt in order to base an intervention to optimize the process of ageing. The protocol consists of different tests to measure all the dimensions considered by the model. We studied 1266 individuals (55+ years old) living in the community. We derived 8 factors, explaining 64.18% of variance: Psychological status (25, 28%); Subjective health (8, 81%); Functionality and Cognition (6.66%); SES (5.67%); Bio-behavioural Competence (5.25%); Satisfaction with Services and resources (4.51%); Personality Characteristics (4.24%) and Life style and social network (3.76%). Our data suggests that psychological determinants were the most relevant ones to explain active ageing. Based in actual theories about ageing, we discuss the protocol and the importance of psychological aspects to adaptation latter in life.

Keywords: *active ageing, quality of life, aging, culture, psychological determinants*

Age differences in active aging: The case of the very old

RIBEIRO, O. (*UNIFAI/ICBAS-UP and ESSUA, UA)

The aim of this study was to observe hypothetical differences between age groups of old people in Active Aging Determinants. Data from a cross sectional survey of Portuguese adults aged 55+ years and living in the community were used. The non probabilistic sample comprises 1266 autonomous people interviewed in senior clubs or local associations. The mean age was 70.32 years (*SD*: 8.66 years). We designed a protocol to measure Active Aging (2002) including variables in all the 6 areas of the WHO (2002) model. Results show that i) personal determinants (e.g. MMSE; GHQ-12; Optimism; Happiness; Loneliness); ii) behavioral determinants (grip strength, peak flow; ADL IADL); iii) social determinants (e.g. family, friends); iv) health and social services determinants (e.g. security, community services); v) economic determinants and vi) demographic determinants, vary significantly with age groups. The only exceptions of variables present in the protocol that did not differ between groups were two Personality factors from NEO-R: Neuroticism and Openness. All the variables measured with the Active Aging Protocol showed worse results as people age. Health, cognitive decline, and depression seem to be the major problems of very old people (85+). Regardless of still being autonomous and living in the community old people lose progressively their adaptation potential and psychologists should intervene earlier to prevent decline and optimize well-being.

Keywords: *active ageing, cognitive decline, depression, adaptation, well-being*

Conceptualizing healthy ageing: The views of older people

BROWNING, C. (Monash University)

The aim of this paper is to examine the views of older people to understand their perceptions of and aspirations for healthy ageing. The paper reports the findings of a large-scale collaborative focus group study of healthy aging conducted in China, Malaysia and Australia by Peking University and Monash University. Using the WHO Active Ageing framework we examined the role of culture and gender in conceptualizations of healthy

ageing and examine implications for the design of programs for older people to support healthy ageing. The focus group questions explored the following issues: How older people understand ageing and healthy (happy) ageing; what are older peoples' ideal expectations of a 'healthy (happy) old age'; and what are older peoples' experiences of ageing? Focus group interviews were transcribed, translated and back translated. From the China transcripts emerged the following themes: good health engaging in activities, access to good food, independence, living a peaceful life with an open mind, living a harmonious, tolerant life, and having enough money. From the Malay transcripts emerged similar themes, however Spirituality was the "trunk of the tree" that supported healthy ageing. It is important to examine cultural conceptualisations of healthy ageing in order to design appropriate programs and care for older people.

Keywords: *healthy ageing, active ageing, culture, gender, China*

Social support in older men and women

MCLAUGHLIN, D. (University of Queensland)

Social support is an important factor in maintaining health and well-being for older adults. Late adulthood is associated with declining social networks due to a number of factors, including the deaths of friends, retirement, declining physical health and decreased mobility. Carstensen's socioemotional selectivity theory proposes that older adults actively prune their social networks to maintain optimal support in the face of limitations such as physical declines. Considerable research supports the view that women, in general, possess social support networks which may be more extensive and robust than those of men, however uncertainty exists whether these gender differences continue beyond age 70. The aim of this study was to compare social network size and satisfaction in men ($n=2,589$) and women ($n=3,152$), aged 72-78 years. Women reported significantly larger networks (Difference 1.36, 95% CI 0.89, 1.83) than men. However, being separated, divorced or single had a significantly greater impact on men's social networks

(Difference 0.92, 95% CI 0.17, 1.68). Poor mental health and sensory impairments were associated with smaller networks and lower satisfaction with support for both men and women.

Keywords: *social support, elderly, social networks, socioemotional selectivity theory, gender*

Group intervention with older adults

LIMA, M. (University of Coimbra)

The purpose of this presentation is to present the possibilities and resources to be used when conducting group intervention (counselling and psychotherapy) with older clients. Although it is still a rare topic and practice, it is, however, an important response to challenges faced by older adults in later life. After presenting a review of the current state of knowledge in this field and in order to reflect on some aspects that have not yet been the object of many studies, we present case examples, emphasizing the practical clinical decisions faced when working with older people in either individual or institutional settings. Some data on ongoing researches in this frame will be presented.

Keywords: *group intervention, counselling, psychotherapy, elderly*

Psychological aspects of service work

Chair(s): BRADLEY, G. (Griffith University)

Discussant(s): BROUGH, P. (Griffith University)

Service industries dominate modern economies, with as many as 75% of workers employed in the service sector in many countries. Central to the delivery of most services are the interactions that take place between employees and customers. The quality of these interactions influences satisfaction levels of both parties, and indirectly affects more remote outcomes such as customer loyalty and service employee well-being. Despite this, psychological studies of “service work” – the actions required of employees to deliver a service, either face-to-face or electronically, to a customer, client, patient or pupil - is in its infancy. Drawing on research conducted in Germany, Spain and Australia, this symposium presents four recent studies of psychological aspects of service work. The studies employ a range of methods: Speaker 1 et al. conducted qualitative analyses of real-life service interactions; Speaker 2 et al. collected self-report data from two sources (managers and subordinates); Speaker 3 et al. used audio-recorded simulated service scenarios in a factorial experimental design; and Speaker 4 conducted a field experiment to evaluate an innovative service employee training program. Analytic methods are equally varied. Notwithstanding this diversity, the four studies share a common aim: to discover ways in which service quality can be improved and service encounters can be rendered more satisfying and less stressful for the participants. Also common to several of the studies are psychological constructs such as emotional regulation, interpersonal trust, psychosocial needs, verbal and non-verbal communication skills, conflict escalation and resolution. Together, the four studies illustrate the strength and diversity of this under-studied, yet growing, field of applied psychology. Key Learning Objectives will include an understanding of contemporary theoretical and empirical developments in the study of

psychological aspects of service work. Participants will also gain knowledge of practical ways in which psychologists can intervene to improve outcomes in service delivery.

A process approach to understanding difficult dyadic call centre encounters

SPARKS, B. (Griffith University)

All service encounters are “first and foremost social encounters” (McCallum & Harrison, 1985, p. 35), involving processes of dialogue and reciprocal influence between interacting parties. Ultimately, the two-way communication between customer and employee influences psychological processes in ways that may facilitate or undermine service encounter success. Our research examines the dynamics of encounters that involve service failures, interpersonal tension and conflict, because these interactions are particularly likely to lead to customer dissatisfaction and to employee strain and eventual burnout. Principles from two approaches, grounded theory and conversation analysis were applied in this research. Telephone interactions between employees and customers that had been previously recorded by four service organisations (utility firm, local government department, financial services firm, and accommodation/tourism organisation) were examined. A theoretical sampling approach was used to select 157 of these real-life service encounters for analysis. All encounters involved disagreement or conflict between employee and customer. With the aid of the software package, NVivo 8, data were coded, and general interaction patterns identified and investigated. Three illustrative findings are cited here. First, when dealing with difficult (high emotion) interactions, service providers frequently adopted the role of “controller”, so as to better manage the interaction (and the customer). However, use of control behaviours too early in the encounter seldom succeeded in containing the customer’s high emotion, and instead often led to escalation of negativity. Second, while most difficult interactions occurred due to core service problems, the handling of the ensuing recovery process by the employee required emotion management prior to a focus on problem-solving or resolving

“concrete” service problems. Third, for customers, many emotionally-charged interactions stemmed from an unfulfilled need to make sense of the situation and from perceptions of low procedural fairness. Difficult service encounters require the management of complex human needs. The development of a “skilled provider” typology is proposed. Better outcomes are likely to occur to the extent that employees (a) possess a wide repertoire of strategies, and (b) are able to engage the correct tactic, at the correct time, based on outcomes from previous strategies and appraisals of ongoing customer needs.

Keywords: *service work, procedural fairness, communication, conflict, burnout*

Linking service quality to manager trust in their subordinates

MARTINEZ-TUR, V. (University of Valencia)

Organizational theory has paid increasing attention to the study of trust (e.g., Kramer, 1999; Luo, 2008). Scholars usually focus their effort on subordinates as trustors. However, the consideration of other combinations of trustors and trustees expands the knowledge. Manager trust in their subordinates is critical because it facilitates the delegation and the commitment of employees (Sherony & Green, 2002). Accordingly, there is a need to examine precursors of manager trust in their subordinates. This research study is an initial step in this direction, examining the role of service quality offered by employees in manager trust. Because managers tend to focus their attention on work and instrumental goals (Kramer, 1996), services of quality offered by employees – directed to customers – can be a very important facilitator of managers’ trust in their subordinates, at least in services. In the service sector, managers are very sensitive to customer perceptions increasing the importance of the service quality employees are able to offer in their interactions with customers. More specifically, we hypothesize service quality perceived by customers will impact on manager evaluation of subordinate performance. This evaluation, in turn, will be significantly related to manager trust in their subordinates. A total of 95

Spanish work centres, devoted to the attention of intellectual disabled persons, participated in this survey study. We used two sources of data: managers of centres ($N = 95$) and external tutors of persons with intellectual disabilities ($N = 850$). Participation was anonymous for both managers and tutors. A group of tutors for each participant organization was randomly selected. Results of structural equation models were congruent with our hypotheses. Manager evaluation of employee performance plays a mediating role between service quality perceived by tutors and manager trust in their subordinates. It is confirmed that service quality is a precursor of managers' trust in their subordinates. This research study contributes to previous trust literature examining specific antecedents of manager trust and stimulating future research efforts. A contingency approach was reinforced where specific sources of trust should be identified for managers in the service sector.

Keywords: *trust, management, instrumental goals, service work, performance*

Communication effectiveness within service encounters: A dyadic psychosocial needs approach.

BRADLEY, G. (Griffith University)

Numerous theoretical perspectives offer insights into the processes occurring within service encounters. The authors of this presentation have recently developed a service encounter needs theory (SENT) to explain the linkages between behaviours and outcomes within service interactions. This theory proposes the existence of eight psychosocial needs pertinent to service interactions and maintains that service encounter success varies with satisfaction of these needs. In contrast to past research that has assessed effects of service exchanges on just one of the participants, we adopt a dyadic approach: we are equally interested in outcomes for customers and employees and we argue that the same set of needs mediates the effects on both parties. This paper reports an experimental test of these propositions. The study used a 2 (role adopted: customer vs. employee) x 2 (rapport between the parties: present vs. absent) x 2 (customer expressive

skills: high vs. low) x 2 (employee listening skills: high vs. low) between-groups design. The 680 participants listened to one of several versions of an audio-recording of a simulated service encounter embedded in an e-questionnaire. They were asked to adopt the perspective of one of the parties whilst listening to the recording and whilst responding to questions assessing psychosocial need fulfilment, satisfaction with the encounter, and emotional exhaustion. Multivariate analyses of variance confirmed predictions that outcomes were more favourable for both parties when exposed to the presence of rapport and high levels of employee listening skills. Participants in the role of employee evaluated the encounter more positively than did those acting as customers. Psychosocial need fulfilment mediated some of the relations between service encounter behaviours and service encounter outcomes. Moderated mediation effects were also observed, such that the mediating role of need fulfilment varied as a function of role adopted. The study has implications for service encounter theory (demonstrating the value of a psychosocial needs perspective), future research (highlighting the potential to investigate employee and customer perspectives simultaneously using an identical service scenario), and applications to the service industry (reinforcing the contribution to service encounter success of rapport-building and active listening processes).

Keywords: *service work, dyadic approach, psychosocial need fulfilment*

Development and evaluation of a program to train the service behaviour of customer contact employees

NEUMANN, C. (University of Rostock)

Service encounters that are characterized by low levels of complexity represent an important contingent of the encounters in personal selling. Script based training is often recommended for these encounters. This kind of training focuses mainly on observable behaviour but neglects the employee's social abilities. We believe that the successful management of low complexity encounters

requires some level of social competence. Hennig-Thurau and Thurau (1999) suggest that social competence consists of four different abilities: verbal and nonverbal abilities, perspective taking, emotion regulation, and the ability to plan and manage customer interactions. Up until now, it has been unclear if these abilities are also essential for encounters with low complexity. Qualitative pre-studies reveal evidence that they seem to be relevant. A training program aimed at developing the four social abilities was developed. The aim of this research is the evaluation of this training program. To judge the success of the training intervention a pre/post-design with an experimental and a control group was chosen. The training was already carried out. Altogether, 43 bakery shop employees were trained and asked to give a self-report of diverse constructs. Additionally, each of the employees was judged by their superiors prior to, as well as four weeks after, the training, in order to assess their customer-oriented behaviour. The control group consisted of 50 employees. Variance analysis with repeated measures and mediation analyses were conducted. Several significant interaction effects can be seen. For example, the customer-oriented behaviours of the training group increased, while those of the control group remained stable. Also a mediator was found. The training intervention has several effects. Especially, the verbal and nonverbal abilities seem to be relevant for service encounters with low complexity.

Keywords: complexity, service work, training, social competence, verbal performance

Psychological assessment in Brazil, Romania and South Africa

Chair(s): OAKLAND, T. (University of Florida)

Discussant(s): OAKLAND, T. (University of Florida)

This symposium discusses the recent history and current status of psychological assessment in three countries: Brazil, Romania, and South Africa. Important historical moments together with difficulties and strategies used to stimulate test development and use will be discussed. We believe other countries may have similar histories and may benefit from the ways our problems are being resolved. Despite considerable social, historical and cultural differences between the three countries, common obstacles to the development of psychological assessment are apparent and were addressed albeit in different ways. Conceptual, theoretical, and empirical data will be used to discuss the key factors in their development. The Brazilian presentation emphasizes the efforts by the Federal Council of Psychology, Brazilian Association of Psychology Assessment, International Test Commission, tests authors, and government agencies to address impediments to psychological assessment common in the 1980s. The Romania presentation summarizes data from three surveys that characterize the current status of assessment practices together with public and policy-maker perception of psychological assessment. This information is discussed in the context of forces that have influenced the revival of psychological assessment in Romania during the last decade. The South Africa presentation discusses the impact of prevailing international trends, watershed political events (e.g. the ill effects of the apartheid policy), and local government policies on test development and use. A rationale for a need to rethink the prevailing paradigm underpinning psychological assessment and test development and use in SA and for an inclusive approach to these matters is presented.

Psychological Assessment in Brazil

NUNES, C. (Federal University of Santa Catarina)

Until the 1980-decade, foreign-developed were used predominantly in Brazil. If adapted, the methods were insufficient in light to then-current psychometrics standards. Some strategies were adopted to address numerous critics made by different social segments. The evolution in psychological assessment since the 1980s will be discussed. Methods adopted or advocated by the Federal Council of Psychology (CFP), the Brazilian Institute of Psychological Assessment (IBAP), and other professional and governmental policies on test development and use together with psychological assessment will be featured. At 2001, Psychological Test Evaluating System (SATEPSI) was implemented by CFP with the purpose of evaluating all psychological tests in light of their technical properties. Tests that displayed suitable psychometric qualities (e.g. reliability, validity, norms) were certified for professional use. The initial reaction was strongly negative many quarters and had only a 51% approval rate among the 106 tests evaluated. Nevertheless, these regulations mobilized test developers and publishing companies to improve their work in light of these qualities. Government agencies provided funds to address this situation. The convergence of these efforts resulted at an accelerated growth in test development and adaptation, including an increased quality and sophistication in validity studies. For example, during 2002, the number of approved tests was approximately 55. Seven years later this number increased up to 109 tests. Many methods to increase psychologist's knowledge of assessment also were created, including specific postgraduate program, IBAP conferences and courses, and efforts of CFP to publish materials about important issues. Although not all problems associated with test development and use together with psychological assessment in Brazil were completely addressed, great advance have been made during the last decade as a result of these efforts. For example, Brazilian psychologists now have a relatively broad and growing range of validated psychological tests to use in their work that assists in the assessment of many constructs important to Brazil's varied contexts.

Keywords: *psychological assessment, Brazil, psychometrics standards, test development*

Psychological assessment and test development in South Africa over the past 100 years

MAREE, G. (University of Pretoria)

This paper discusses the prevailing impact of international trends, watershed political events (e.g. the ill effects of the apartheid policy), and local government policies on test development and use in South Africa. Scholarship and government-developed documents are used to identify and trace trends in the development and use of psychological tests in South Africa with a view to describe current conditions and provide guidelines for future development and use. The development and use of psychological tests in SA have been impacted appreciably by prevailing international trends, watershed political events, and local government policies. Furthermore, the majority of psychological tests were imported and adapted, largely for use with white clients. In addition, the now defunct apartheid system has greatly influenced assessment practices. A need exists for a more inclusive approach to psychological assessment and test development and for rethinking the current paradigm underpinning test development in South Africa. A theoretical framework that combines facets of a quantitative approach with career construction (for life designing) approaches is introduced and discussed. An open, respectful, 'best practice' approach seems to be in the best interests of all South Africans. The leadership of the Psychological Society of South Africa is essential to establish a better future.

Keywords: *psychological assessment, South Africa, psychometrics standards, test development, career construction*

Psychological Assessment in Romania

ILIESCU, D. (SNSPA University, Bucharest)

Psychological assessment in Romania and other Soviet-dominated countries was not widely accepted. However, a new era emerged during the 1990s. Test development and use grew significantly during last decade following

the investment of considerable intellectual, industrial, and financial resources in the country. Survey data from practitioners and the general public are used to describe the current status of psychological assessment in clinical, educational and I/O psychology. These include the assessment practices of 422 psychologists, 400 members of the public, and 100 managers of public, industrial, educational, and military institutions as to their perception of psychological assessment. Professionals generally view assessment practices to cover a large range, from those that are good to others that are unacceptable when compared with international guidelines. The public is concerned about fairness in testing practices. Perceptions by policy makers toward psychological assessment generally are positive and reflect broader issues than that found in the public's perception. Various forces are contributing to the development of psychological assessment in Romania. These include a growing international market for tests and education, pioneering work of test publishers, support through government investment, institutional structuring (e.g. the creation of the Romanian Board of Psychology), efforts of the International Test Commission, together with other international institutions to promote good practices.

Keywords: psychological assessment, Romania, education, test development, International Test Commission

Psychological issues in a multicultural society

Chair(s): THOMAS, T. (RMIT University)

Discussant(s): SOPHIA, X. (RMIT University)

Migrating to a new country with different culture is now a global phenomenon. Very few countries in the world are now mono-cultural, yet living in a multicultural society is not easy for many migrants. The main objective of the symposium is to explore issues that are important for harmony and well-being for members of a multicultural society. The symposium presents three projects on community psychology in a culturally diverse society. Projects conducted with the Filipino and Vietnamese communities in Australia are reported. The Filipino community in Australia is characterized by gender imbalance with women outnumbering men. The first paper reported a research on the acculturative issues concerning older Filipino who are living in rural and urban regions in Australia. The second paper reports on a research project conducted to identify factors that are associated with psychopathology in Filipino women who came to Australia as "Mail ordered" brides and "Grandmothers" to care for their families. The third study explores factors that influence the difficult relationship between police forces and the Vietnamese community. The Vietnamese community in Australia has been stigmatized by its crime rates and difficulty with law and order. Barriers that hinder communication, trust and understanding between the two groups are explored. A general discussion about psychological issues in a multicultural society will then be presented.

A place to call home: Acculturation and ageing for Filipino seniors in Australia

CICHELLO, M. (Commonwealth Department of Health)

This study investigates older Filipinos' adaptation after migration and its impact on their ageing and general well being. The

research design addresses several issues associated with cross-cultural research including sample size, distance, language and back translation of instruments from English to Filipino. The bilingual researcher interviewed 300 Philippine-born male and female participants aged between 55 and 92 years, who are living in urban and rural communities across Australia. The questionnaires collected data on participants' migration experiences, acculturation measures, ageing experiences, social support and psychological well-being. Quantitative data analyses highlight significant differences in demographic, gender and age cohorts within the sample group. There was a significant relationship between migration variables and ageing for both Filipino men and women. The acculturation scores indicate a bicultural sample but unexpected major differences in the acculturation patterns of ageing Filipinos residing in urban and rural regions of Australia emerged. Findings showed that age on arrival, reason for migration, education and marital status contributed significantly to the adaptation of older Filipinos to Australia. Participants who migrated at an older age disclosed more negative adjustment and ageing experiences compared to those who migrated at a younger age and grew old in Australia. Participants who migrated under Spouse visa or Family Reunion Program and settled in rural areas reported easier adjustment and higher integration. Social support correlated strongly with positive ageing experiences and high mood scores in this sample. Empirical evidence from the study will provide policy makers and service providers with an understanding of cultural and socio-psychological determinants of positive ageing in older Filipinos.

Keywords: migration, ageing, well-being, social support, cultural diversity

Working with Filipino “brides and grandmothers”: Cultural perspectives

WILKS, A. (RMIT University)

This paper discusses the factors that are associated with psychopathology in Filipino women whose community is characterised by gender imbalance because of the large migration of women who came to Australia as

brides and grandmothers. This paper reports on a correlational, cross-sectional study with multivariate analysis, conducted to identify factors that are associated with psychopathology in Filipino immigrants in both metropolitan and regional areas Australia. The study was conducted in three stages, combining both qualitative and quantitative approaches in cross-cultural research. Participants include 194 older Filipino women migrants aged 50 and above. Following the stress and coping framework, the study examines the role of factors including reasons for migration, health, social roles, cohort effect, coping strategies, and social support on psychological distress. The results indicate that Filipino cultural values and norms determine the adaptive settlement and acculturation in the host country. Culture influence factors such as education, living arrangements, reason to migrate, employment, coping style, and social support that contribute significantly to positive psychological well being and ageing for this sample. Filipino cultural values inform future planning for this group of migrants whose community is characterized by gender imbalance.

Keywords: Filipino, coping strategies, gender imbalance, migration, social roles

The relationship between police and the Vietnamese Australians: challenges to intercultural communication

VIET TINH, N. (RMIT University), MCKERNAN, H. (Swinburne University)

This study explores the key factors that impede relationship and communication between the Vietnamese community and police in Australia. The study investigates police officers' experience of professional relations with members of the Australian Vietnamese community, including their understanding of risk, trust and information gaps. Attitudes of Australian Vietnamese community members to police, crime, security and community policing are also explored. Participants included 60 police officers and 28 members of the Vietnamese community. First, semi-structured interviews with police officers from Victoria Police about their experiences with the Vietnamese community were conducted.

Secondly, the study conducted six focus groups with representatives from the Vietnamese Community. Personal and professional experiences in relation to justice and Police were discussed, as well as perceptions of local Police and satisfaction of their performances. Systematic and thematic analyses approaches were used to analyze the responses. Some early themes emerging from the data showed that language barrier remained a significant obstacle to improved relations between police and Vietnamese Australians and lack of trust existed between police and the Vietnamese community. Results from analyses of the focus groups discussions showed that historical and social conditions had some affects on the attitudes of Vietnamese people toward justice and police. There was strong relationship between the attitudes of Vietnamese people and direct/indirect contacts with police and justice. Factors that had significant influences on attitudes of Vietnamese people included education, profession and birth places. Language barrier and cultural differences were key factors in people's willingness to report crime and cooperate with police. Years of arrival in Australia and birth places were found related to the level of satisfactions of local police. As there is a lack of trust between police and the Vietnamese community, how does Victoria Police build the skills for officers that assist them to communicate with and build relationships within Vietnamese Australian people? Further and in-depth studies with a bigger sample of Vietnamese population are clearly needed to test suggestive trends from these studies.

Keywords: communication, Vietnamese community, police, Australia, trust

Psychological models to understand behavioral change for more sustainable lifestyles

Chair(s): MOSLER, H. J. (Eawag), KAISER, F. G. (Otto-von-guericke University)

Discussant(s): MOSLER, H. J. (Eawag)

Psychology has a thirty-year tradition of investigating the psychological origins behind pro-environmental action. The reason for a new-born interest in these sources of individual behavior derives from the urgency of initiating behavior change on a large scale, to halt progressive environmental deterioration or, at least, to slow it down. In other words, psychology aspires to effectively change individual behavior to create more sustainable lifestyles in individuals. More precisely, the psychological origins behind pro-environmental behavior are suspected to offer the psychological leverage for change. With psychological leverages, however, it is not only their efficacy that matters, but also their malleability, and their suitability for behavior-change campaigns. Are the identified psychological forces behind action also useful for large-scale behavior-change interventions? In this symposium, we brought together colleagues interested in psychological models that are suitable to guide behavior change in various settings concerning multiple types of pro-environmental behavior. In bringing these colleagues together, we aim to discuss the efficacy but also the suitability of various psychological leverages to modify individual behavior and lifestyles. Corral-Verdugo focuses on the psychological benefits of sustainable behavior of individuals as a potential future selling argument to promote pro-environmental engagement. Hine argues for a better understanding of experiential and analytic processes behind behavior in order to develop effective interventions to promote sustainable lifestyles. Tobias recognizes reminders and commitment as the core factors behind the habituation process towards more sustainable engagement. Kaiser and Roczen develop an

environmental competence model that is expected to turn education for sustainable development into an empirically guided endeavor. Their emphasis is on environmental knowledge and appreciation for nature. Milfont and Bieniok, finally, highlight the importance of peoples' time perspective on their attitudes and behaviors toward the environment.

Personal and subjective well-being as correlates of sustainable behavior

CORRAL-VERDUGO, V. (University of Sonora, Hermosillo)

The aim of this study was to investigate some positive psychological consequences of sustainable actions. The concept of sustainable behavior (SB) is defined, by framing it within the objectives of Positive Psychology (Seligman & Csikszentmihalyi, 2000) since SB is aimed at developing psychological traits and actions benefiting both the individual and her/his community. The studied positive consequences included happiness and personal well-being. The main hypothesis established that sustainable behavior, indicated by pro-ecological, altruistic, frugal, and equitable behaviors, is more frequent in people obtaining psychological benefits in the form of subjective and personal well-being. 150 individuals responded to an instrument including scales that assessed the four types of SB. Pro-ecological behavior was measured by using Kaiser's (1998) General Ecological Behavior instrument, while altruistic, frugal and equitable actions were self-reported through scales developed by the author of this communication. The participants also responded to Lyubomirsky & Lepper's (1999) Happiness scale and to Ryff's (1989) Personal Well-being instrument. Results were processed through a structural equation model wherein sustainable behavior was specified as affecting the assessed positive psychological outcomes. The scales produced indicators of reliability and convergent validity, while high and significant interrelations among the pro-ecological, altruistic, frugal and equitable behaviors confirmed the presence of a higher-order SB factor. The assessed sustainable behaviors were significantly related to happiness and personal well-being.

Environmental psychology has traditionally focused its research programs on the psychological antecedents of sustainable behavior, somehow neglecting the study of its positive psychological consequences. As this study and some others show, happiness, psychological restoration and additional positive states are more frequent in people that engage in actions that protect the physical and social environments. These results should motivate further studies on the psychological benefits of sustainable behavior.

Keywords: *sustainable behaviour, positive psychology, psychological traits, well-being, happiness*

The role of affect and reason in facilitating and inhibiting changes to more sustainable lifestyles

HINE, D. (University of New England)

Dual process models assume that human decision making and behavior are guided by two distinct information processing systems: (a) an experiential system that is passive, automatic, rapid and intimately tied to affect, and (b) an analytic system that is conscious, intentional, logic based, and largely affect free. In order to encourage sustainable lifestyle choices, researchers and policy makers need to better understand how both systems operate and how they interact with each other. Findings from a series laboratory, questionnaire and field studies focusing on substance use, sexual aggression and pro-environmental behavior will be presented. Methodologies for assessing experiential and rational cognition will be highlighted, as will implications for eliciting sustainable lifestyle choices. The pattern of results across studies indicate suggest indicate that: (1) conscious beliefs regarding the benefits of positive lifestyle changes (or the costs of not making such changes) may be undermined by contrary affective output from the experiential system, and (2) individual differences in working memory capacity and thinking style predispose individuals to over-rely on the output from one system or the other, suggesting that, to be effective, sustainability initiatives will need to be carefully tailored to audience characteristics. The dual process perspective

highlights the important roles played by both experiential and analytic processes in guiding decision-making and behavior. These processes need to be better understood to develop effective interventions to promote sustainable lifestyle choices.

Keywords: dual process models, decision making, experiential system, analytic system, lifestyle

The long way to habits: Computer simulation of a campaign promoting water disinfection in Bolivia by prompts

TOBIAS, R. (Swiss Federal Institute of Aquatic Science and Technology, Dübendorf)

Behaviors of a sustainable lifestyle will only have the desired impact if repeated over long periods of time. The goal is to establish habits that lead to an enduring performance of these behaviors. However, for habits to establish, the behavior has to be performed sufficiently often. This can be difficult to reach, since persons often forget performing new behaviors at the right moment. Reminders like prompts can reduce forgetting and thus promote the development of habits. This study aims at a better understanding of how habits establish and what factors determine success and failure of this process. To investigate the complex interactions between forgetting, habit development, reminding events, and the effects of prompts, a computer model was developed based on findings in the literature. During a campaign in Bolivia, where prompts were applied to promote the use of a sustainable way to disinfect water by exposing it to sunlight, time-series data of the behavior performance were collected. By calibrating the model to these data and running system analyses, the latent processes that produce the observed behavior dynamics could be isolated. The data show that, in many cases, shortly after the start of the intervention with a sharp increase of behavior performance, the frequency of performing the behavior decays and then, within about a month, increases again. The model replicates well the empirical time series. It explains the decay with forgetting the behavior more and more often. However, the reminders used in the campaign prevented that the behavior was forgotten too often. Thus, habits could develop that, over

time, increased the behavior frequency by supporting the recall of the behavior. Further analyses showed that the effect of reminders depends strongly on the commitment to perform the new behavior and decays over time. For understanding habituation, a process view has to be adopted and a number of interacting factors considered. Time-series data and computer simulation allow a formal empirical analysis of the processes involved. The model allows investigation of a number of interventions for promoting habituation and supports the planning of campaigns for sustainable behavior change.

Keywords: sustainable lifestyle, forgetting, habit development, reminding events, behavior performance

Environmental competency: The interplay of appreciation of nature, and knowing why, what and what best

KAISER, F. (Otto-von-Guericke University Magdeburg), ROCZEN, N. (Otto-von-Guericke University Magdeburg)

Pro-environmental education and education for sustainable development traditionally aim to activate theoretically derived ecology-unspecific, general proficiencies, such as problem-solving or value-reflection abilities. Such general abilities are, however, behavior-distal and thereby often found to be empirically irrelevant to individual pro-environmental performance. By contrast, our competence model is grounded in the ecology-specific abilities environmental knowledge and appreciation for nature (i.e., connection with nature. Our sample consists of 1.922 students from seven schools. The schools were sampled from high and medium stratification high schools within the German secondary education system. The students were sampled from three different grade levels. Their average age was 13.7 (age range: from 11 to 20). Of all students, 56 percent were females. Based on cross-sectional survey data, we calibrated five ecology-specific instruments with different models from the family of Rasch models, measuring (1) environmental system knowledge, (2) action-related knowledge, (3) effectiveness knowledge, (4) appreciation for nature, and (5) general ecological behavior. All

five instruments confirmed previously established good scale characteristics in terms of item and person fit statistics. The relatively poor reliabilities of the knowledge measures are due to the generally low attainment levels of the pupils. Based on structural equation modeling, we were able to confirm the anticipated hypotheses about the interrelations among the five concepts. While knowledge revealed only a rather moderate behavior effect, people's appreciation for nature turned out to be the expected effective predictor of pro-environmental engagement. At the same time, appreciation for nature is not only behavior-relevant but apparently also sparks curiosity to learn more about the environment. Surprisingly low was the overall level in environmental knowledge among young adolescents in Germany. Increasing the absolute extent of people's environmental knowledge, fostering the integration, the conversion of different types of environmental knowledge, and stimulating appreciation for nature are, as we believe, three effective measures to promote sustainable patterns of behavior in individuals. Well-established concept measures will help to evaluate progress along the way, and altogether, by using an empirically derived competence model, environmental education will eventually turn into a more empirically guided endeavor to the better of humankind.

Keywords: pro-environmental education, problem-solving, ecology-specific abilities, schools, environmental knowledge

The role of psychological time in tackling environmental issues

MILFONT, T. L. (Victoria University of Wellington),
BIENIOK, M. (Humboldt University at Berlin)

Environmental issues have long been viewed as posing social dilemmas in which individual and collective interests are at odds. Prior research investigating why people cooperate in environmental social dilemmas has mainly focused on social concerns, showing that people's identification and/or concern with others can encourage higher levels of cooperation. However, recent research has shown that temporal aspects are also important in environmental social dilemmas.

This is because environmental issues entail not only social conflict (individual vs. collective interests) but also temporal conflict (short- vs. long-term interests). In this talk, we will present findings from our research program examining the influence of people's psychological time on their attitudes and behaviors toward the environment. In particular, data from a survey questionnaire administered to general and student populations from Germany and New Zealand will be discussed. This study investigated the influence of five time perspective dimensions (Past-Negative, Past-Positive, Present-Fatalistic, Present-Hedonistic and Future) on environmental attitudes and self-reported ecological behaviors. The Germany sample was composed of 299 participants (77% female; mean age = 27 years, $SD = 7.6$), and the New Zealand sample of 322 participants (70% female; mean age = 19 years, $SD = 2.6$). Participants completed the Zimbardo Time Perspective Inventory, the Environmental Attitudes Inventory, and an 8-item self-reported ecological behavior scale. Consistent findings emerged across countries. Results from hierarchical regression analyses showed that Present-Hedonistic and Future positively predicted ecological behavior, while Present-Hedonistic also positively predicted environmental attitudes. In line with previous studies, future-oriented individuals (those who are concerned about the future consequences of their actions) seem to act more to address environmental issues. Surprisingly, present-hedonistic individuals (those who are oriented towards present pleasure) also seem to be environmentally inclined. Hedonistic people seek stimulating and novel information, and tend to have a liberal outlet in life, which might explain the link between hedonism and environmental protection. Tackling environmental problems requires understanding of the psychological factors that motivate people to show concern for, and take action on, environmental issues. Our research shows that psychological time influences behaviors and plays an important role in people's assessment of environmental risks.

Keywords: environmental social dilemmas, social conflict, temporal conflict, future orientation, present-hedonistic individuals

Psychological needs of caregivers

Chair(s): GOODHEART, C. D. (American Psychological Association)

An increasing number of people around the world are caring for loved ones who are aging or living with chronic diseases or disabilities across the lifespan. Caregiving is a mental health risk factor that significantly affects the work of psychologists. This symposium offers a cross section of presentations that address the needs of a broad group of family caregivers. These include discussions of a new online resource: the APA Family Caregivers Briefcase for Psychologists, the emotional costs for professionals who work with very ill children, Australian initiatives for caregivers of people with dementia, and the role of cultural values in shaping responses to caregiving stress.

The 2010 American Psychological Association presidential initiative on caregivers

GOODHEART, C. D. (American Psychological Association)

Caregiving is a mental health risk factor that significantly affects the work of psychologists. Almost everyone becomes a caregiver at some point in her/his life. It is a family issue, a life span issue, a public health issue, a socio-cultural issue, a health disparities issue, and an international issue. This presentation discusses the development of the APA Family Caregivers Briefcase for Psychologists, a web-based compendium of resources for psychologists and allied professionals that includes awareness, roles, resources, and opportunities. It is designed to assist psychologists in assessing and addressing the needs of a broad group of family caregivers.

Keywords: *caregivers, briefcase, resources*

Psychotherapy for children with life-threatening illness: The high cost of helping

KOOCHER, G. P (Simmons College)

The psychotherapeutic care of children and adolescents confronting life-threatening illness can afford practitioners an opportunity to make a very positive difference for families at a critical and highly vulnerable moment in their lives. At the same time, such valuable work comes at a high emotional cost with accompanying burnout hazards to practitioners who venture into this work. This presentation will discuss the value of the work and strategies for maintaining practitioner resilience.

Keywords: *practitioner resilience, children, life-threatening illness*

Innovative strategies in Australia targeting caregivers of persons with dementia

PACHANA, N. A. (The University of Queensland)

The Australian context presents challenges to delivering psychological assistance to persons with dementia and those who care for them. Examples of three innovative programs aimed at improving caregiver mental health are discussed: 1) the commonwealth-sponsored service, Dementia Behaviour Management Advisory Service, which offers assistance to home carers as well as residential aged care facilities in understanding and better responding to behaviours of concern in persons with dementia; 2) a postal based psychosocial support project targeting regional and rural caregivers; 3) several projects facilitating placement of clinical psychology trainees in residential aged care settings. All of these projects address two important issues in the Australian context, namely restricted psychological services in regional and rural areas, as well as restricted access to psychological services by those living in residential aged care facilities.

Keywords: *caregivers, dementia, regional, rural*

Cultural values as an influence on stress and coping among family caregivers of persons with dementia

KNIGHT, G. (University of Southern California)

Drawing on research with US ethnic populations as well as studies with caregivers in Spain, Korea, and Japan, the role of cultural values in shaping responses to caregiving stress is explored. The updated sociocultural stress and coping model suggests a common core model that links behavior problems to appraisals of burden to physical and mental health outcomes. The role of cultural values examined to date has been mediated more through coping styles and social support rather than through appraisals of burden as first expected. Future directions for research in this area include a greater focus on group specific cultural values and more attention to measurement issues across cultural groups.

Keywords: *caregivers, burden, mental health*

Psychological perspectives on men's health

Chair(s): WALKER, G. (Monash University)

A growing body of research has provided strong evidence that men have less healthy lifestyles than women. The search for explanations as to why men are more likely to adopt unhealthy beliefs and behaviours has led researchers to examine men's views about being a man. Pleck (1981) introduced the gender role strain paradigm, which has resulted in the development of a number of measures for examining men's gender role beliefs. The first paper examines the extent to which relationship satisfaction for men relates to conformity to traditional male norms. Furthermore the study also considers the context of men's lives by examining the impact of social support on these variables. The second paper is concerned with factors that influence the likelihood of men seeking help in response to health problems and examines the role of masculine norms and general self-efficacy. The third paper also looks at the way that context may impact on help seeking behaviour for mental health issues with a comparison of Australian and Egyptian men on their conformity to traditional male norms and their perception of stigma. The final paper examines men's help seeking in relation to depression in the context of a qualitative investigation of men's experience of depression.

Masculinity, perceived social support and relationship satisfaction

TOOP, F. (Monash University)

To explore the association between conformity to masculine norms and relationship satisfaction in a sample of married or de-facto men and women raising children. Additionally the study sought to examine whether an association between masculine norm conformity and relationship satisfaction was mediated by differing sources of perceived social support; a significant other, family or friend. Participants were 49 females and 58

males who were recruited via word of mouth and advertising. Participants were asked to complete four questionnaires, a demographic questionnaire, the Relationship Assessment Scale (RAS), Multidimensional Scale of Perceived Social Support (MSPSS) and the Conformity to Masculine Norms Inventory (CMNI). A modified version of the Conformity to Masculine Norms Inventory was used in order to evaluate women's perception of their male partner's conformity to traditional masculine norms. Pearson's product moment correlation co-efficients were calculated to explore the associations between men and women's RAS and CMNI total and sub-scale scores. A significant negative association was found between both men and women's total CMNI and RAS scores. In addition the subscales of men's Risk Taking, Emotional Control, Self-Reliance, Primacy of Work and Playboy were all significantly negatively correlated with men's RAS. In contrast, women's CMNI subscale scores, Winning, Violence, Power over Women, Dominance, Playboy, Self-Reliance and Primacy of Work yielded significant, negative correlations with women's RAS. Mediation analyses were used to investigate the influence of perceived social support on the relationship between CMNI and RAS. Perceived social support from family fully mediated the effect of conformity to masculine norms on relationship satisfaction for men. Social support from a significant other fully mediated women's perception of their partner's conformity to masculine norms and relationship satisfaction. The study addressed the call for greater research into the different contexts in which varied masculine gender beliefs operate, and the potential influence of third variables on masculinity and psychological outcomes. Results reaffirmed the argument that adherence to traditional masculine ideologies is associated with decreased relationship satisfaction for both men and women. The significance of specific traditional norms were shown to vary for the present sample of cohabiting men and women involved in parenting, as compared to previous samples of dating college-aged students. The finding that perceived social support acted as a mediator suggests that greater conformance to traditional masculinity may reduce one's perception of available social support, that is,

in turn, related to decreases in relationship satisfaction; subsequently, highlighting the valuable role potential third variables can play in the complex relationship between masculinity and relationship satisfaction. Consequently, clinical interventions which address social support could potentially assist in reducing potential negative effects of conformance to traditional male ideologies.

Keywords: *conformity, masculine norms, relationship satisfaction, social support, risk taking*

Predicting barriers to men's health-care utilization: The role of masculine norms and general self-efficacy

BOMAN, E. (Monash University)

The study explored the relationship between Australian men's masculinity, general self-efficacy (GSE) and perceived barriers to health-care utilization. Possible relationships between these constructs could provide further evidence for how men's health-care utilization relates to the social construction of masculinity. Additionally, by assessing the relationship that general self-efficacy has with masculinity and barriers to health-care utilization, this study aimed to explore further ways by which the variation in men's health-care related help seeking can be explained. The participants were 118 men ($M = 23.7$ years, $SD = 6.18$ years), most of whom were Australian undergraduate university students who completed on-line measures of the constructs. The measures used were (i) The Conformity to Masculine Norms Inventory (CNMI.) The CNMI (Mahalik et al., 2003) administered to measure the extent to which participants conformed to masculine norms (ii) The Barriers to Help-seeking Scale (BHSS) (Mansfield, Addis & Courtenay, 2005) used as a measure of the barriers that men might perceive to utilizing health-care (iii) The General Self-efficacy Scale (GSE) (Schwarzer & Jerusalem, 1995) designed to tap into a person's beliefs about the capacity to deal effectively with a broad range of daily hassles and stressful life events. As hypothesized, masculinity was positively related to barrier perception and to GSE, and GSE was negatively related to barrier perception. As hypothesized, masculinity and GSE were significant predictors of perceived

barriers. The hypothesis that GSE would moderate the relationship between masculinity and perceived barriers was partially supported with significance found under conditions of low general self-efficacy. This study revealed that men's reports of masculine norm conformity and general self-efficacy were related to their perceptions of barriers to health-care utilization. These relationships varied depending on the barrier being assessed, which emphasized the importance of contextualizing men's help seeking behavior. The additional finding that general self-efficacy partially moderated this relationship highlighted the usefulness of this construct for explaining variability amongst men. It also underscored the possibility that the understanding of men's health-care utilization may be benefited through integration with existing health behavior models and constructs.

Keywords: *men, masculinity, general self-efficacy, health-care utilization, help-seeking*

The cultural context of men's help-seeking behaviour: The importance of male role socialization and social stigma.

HANNA, A. (Monash University)

The study explored the relationship between men's conformity to masculine norms, levels of perceived social stigma and help-seeking attitudes and behaviours in Egyptian and Australian men. The participants included 121 men aged between 21 and 35 ($M = 27.02$ years, $SD = 3.91$), composed of 61 Australian ($M = 26.5$ years, $SD = 3.66$) and 60 Egyptian men ($M = 27.6$ years, $SD = 4.1$), who completed the online self report measures of the constructs. As hypothesized, it was found that men's conformity to masculine norms and experiences of self-stigma, were negatively related to their attitudes towards professional psychological help-seeking. Egyptian men demonstrated a greater endorsement of masculine norms and exhibited higher levels of self-stigma than Australian men. Furthermore, it was found that Egyptian men held more negative attitudes towards professional help-seeking than Australian men. Finally, the study explored the help-seeking behaviours and masculinity ideologies of Egyptian and

Australian men and noted several significant differences between cultural groups. The study has revealed that men's conformity to masculine norms and social stigma is related to negative help seeking attitudes and behaviours. However this relationship was not found within the Egyptian-Australian migrant population and suggests that other factors may be more salient in this particular culture. Both conformity to masculine norms and levels of perceived stigma were found to vary between Egyptian and Australian men highlighting the importance of investigating these constructs within culturally specific settings. Furthermore, differences were also found between groups, in the forms of help previously sought and in anticipated help-seeking behaviour. The finding that Egyptian men will predominately rely solely on advice from family and religious services for mental health concerns, underscores the mental health risk of men from this culture who are reluctant to seek appropriate psychological assistance to deal with their issues.

Keywords: *conformity, masculine norms, social stigma, help-seeking, cultural diversity*

“Nobody understands”: A qualitative analysis of men's experience of depression and barriers to seeking help

WALKER, G. (Monash University)

This study uses a grounded theory qualitative design to consider the role of male gender stereotypes in men's reluctance to seek help, what encourages or discourages men from seeking help and the effect of social networks on the support they seek. The sample consisted of eight males who agreed to be interviewed about their depression. The study was previously advertised at a men's health forum presented by the cities of Casey/Cardinia, which had an attendance of around 250 people. The participants responded to a call for male volunteers between the ages of 18-85 who had suffered depression. The men then participated in semi-structured interviews ranging from 1-2 hours. Topics for the interview were generated from a review of the literature on men's depression and help-seeking. Key topics included reactions

to the term 'depression', causes for depression, initial signs, symptoms, masking or hiding depression, help-seeking and level of need reached before seeking help. Participants generally adhered to a stereotypical male gender role by avoiding signs of weakness and vulnerability and trying to stay in control. This initially made it more difficult for them to recognise depressive symptoms and then made it more difficult for them to seek help. The study also found that a number of the men sought help when encouraged to do so by those around them. Seeking help was initially perceived to be a negative thing by most men as they struggled to believe that anyone would understand what they were experiencing and if they did understand, they believed no one could really help. Many couldn't see the point in seeking help and for others there was still the stigma attached to depression that prevented them from reaching out. Given that general practitioners and intimate partners are considered influential in men's help seeking behaviours, it is suggested that they be targeted more in campaigns encouraging men to seek help (Mahalik & Rochlen, 2006). Studies have also indicated that increasing education about misconceptions related to depression may decrease stigma attached to it and promote help seeking amongst men (Wang, Fick, Adair, & Lai, 2007). This could be done through different community-based programs or even websites that preserve some sense of anonymity.

Keywords: male gender stereotypes, help-seeking, depression, stigma, community-based programs

Psychological research and practice with women – problem or solution?

Chair(s): GRIDLEY, H. (Australian Psychological Society)

This symposium will critically examine ways in which psychological theory, research and practice with women can be conceptualized as 'part of the problem' or 'part of the solution' in promoting gender equity and socially just outcomes for women. Guiding questions and related learning objectives across the three papers include: (1) How are our commitments to feminist values evident in our research and practice? (2) How do we enact gender equity in our work as researchers, practitioners and educators? (3) What psychological initiatives or achievements in gender justice are worth celebrating and sharing? (4) How can the pedagogy of psychology be better directed in ways that ensure future generations can contribute towards improving the lives of women? The first paper raises questions about the tendency for gambling research to over-emphasise gender differences based on stereotypical preferences and behaviours, and presents some research findings that confound such unhelpful assumptions. The second paper focuses on gaps in psychological training and practice that may impede the accurate and timely identification of domestic violence as a presenting problem, and examines a recently developed assessment framework designed to be used by general health workers, community service workers and counselors. The third paper provides an antidote to much of the research and practice literature that problematises and pathologises the lives of lesbian women. The author presents research analysing aspects of the family life of lesbian women in Australia, and considers how their psychological health and well-being can be promoted and their resistance to the effects of discrimination supported in public policy as well as health service provision.

Gender differences in gambling behaviour: Do the pokies offer a bankrupt equality between the sexes?

DUNN, C (James Cook University), CALTABIANO, N. (James Cook University)

Over the past decade the focus on gender 'differences' has received considerable attention in the gambling research literature. Stereo-typical differences are invariably cited, with males predominantly preferring games of skill or multiple activities (racing, sports betting and casino) and females displaying preference for singular, passive games of chance (pokies and lotto). Recent evidence suggests that regular (at-risk) poker machine players display minimal gender differences. Furthermore, these findings suggest that the variation in motivations to gamble, individually, far outweigh gender differences, generally. This study presents a number of motivational profiles and quantitative results of problem gamblers who took part in a larger study. Issues such as feminist approaches to problem gambling treatment, motivational enhancement and the resistance to gender stereotypes by women who initially gain empowerment from gambling are discussed. While gender stereotypes are evident in occasional gamblers and in 'pathological' gamblers, there appear to be more similarities than differences in regular (at-risk) poker machine gamblers. This may highlight both the highly repetitive, practised nature of the activity, and also the role of socialisation in a highly conducive, safe and female-friendly environment of gaming venues. While there is a well established tendency for males to over estimate their skill, and females to be strongly influenced by negative appraisals, it is argued that both genders display the same unrealistic beliefs about winning.

Keywords: gender differences, gambling, gender stereotypes, motivational enhancement

Who knows? Practitioner skills, ethics and domestic violence

O'BRIEN, C. (Doncare)

Over the last 10-15 years, the social, political and legal response to domestic violence has

changed in many western countries. It is now widely recognized in government policy as a gendered crime, and the legal definitions now include psychological, social and financial as well as physical abuse. At the same time, surveys continue to reveal that community attitudes are lagging behind this understanding. With little reference to domestic violence in many training courses, it is understandable that medical, legal and psychological/counselling professionals may also have outdated views on this issue, or be practising without a best practice understanding of the dynamics involved or the interventions that are best suited to this presentation. What do we know about this likely gap in expertise, what harm may it be causing and how can we close the gap among psychologists and related professionals? A brief overview will examine research on the capacity of mental health and related professionals to identify and assess presentations where domestic violence is suspected or reported. The paper will then consider the recently developed assessment framework and tools being used by Victoria Police and the specialist Domestic Violence sector in Victoria, Australia. There is evidence that medical and mental health professionals have low rates of correctly identifying the incidence of domestic violence among their clients. In part, these findings can be attributed to lack of training and understanding; they may also be related to persistent unhelpful community attitudes. This paper will critically articulate the issues that arise when domestic violence is not correctly identified, and offer some training guidelines and assessment tools now available for assisting health professionals in this work.

Keywords: domestic violence, assessment tools, Victoria Police, training guidelines

‘It’s just everyday’’: Resources and strategies, including non-discriminatory family-related legislation and public policy, that promote the health and well-being of lesbian mothers and their children

SHORT, E. (Victoria University)

Although the heterosexism and discrimination encountered by lesbian women who are mothers can have negative practical, financial, social and psychological consequences, lesbian mothers and their families frequently thrive. The aim of this research was to analyse aspects of the family life of lesbian women in Australia, including how the varying legal, public policy, social and discursive contexts (including the recent legal changes to recognise both women in a female couple as parents of children conceived via assisted reproduction) affect and shape family life and well-being, and how psychological health and well-being can be promoted. In-depth semi-structured interviews were undertaken with 68 participants from three States and Territories of Australia (56 lesbian mothers or intending mothers and 12 service providers or community organisers). The data were analysed using a contemporary grounded theory approach, and contextualised with analysis of legal, public policy and other documents. Various resources and strategies can build or maintain resilience and well-being and assist lesbian women and their families to navigate and resist both structural and ‘mundane’ heterosexism and discrimination. A range of the legal, social, emotional, and knowledge-based resources and strategies which promote the well-being of lesbian women and their families is presented, including the very significant recent legislative amendments in Australia to recognise the family relationships of parents and children in the families of lesbian women. It is important to promote knowledge of these resources and strategies, including the importance of non-discriminatory laws and policies, to health and other service providers, public policy makers, and legislators. Knowledge about how lesbian women and their families can maintain resilience and well-being in the context of heterosexism and discrimination can also

potentially be of benefit to other people who experience various types of discrimination and stigma, and for those who work with such people.

Keywords: *lesbian women, lesbian mothers, public policy, legislative amendments, discrimination*

When caring is bad for your health: Depressed women identify key factors to guide their recovery from depression

VIDLER, H. (University of Western Sydney)

We know that the pathways into and out of depression vary for every individual and involve a combination of physical, intrapsychic, interpersonal, social and contextual factors. The work with depressed individuals is slow and complex. Identifying common factors can support this work and produce meaningful and lasting results. Building on earlier research that used in-depth interviews to ask women about their experience of being depressed and also of recovery, the SHIFT-Depression tool has been developed to aid treatment planning. Women over 18 years, self-assessed as sad or depressed, were recruited via newspaper and radio. Women completed an online survey that included the Centre for Epidemiological Studies Depression Scale (CESD) and the Self Help Inventory For guiding Treatment of Depression (SHIFT-D). From 223 completed responses and using a cut point of 16 with the CESD provided a sample [$N=206$, Mean CESD score (33.98) SD (8.16)]. Findings on the SHIFT-D, Part A ‘Things connected to my sadness or depression’ and Part B ‘Things that may help alleviate my sadness or depression’ showed a strong correlation with issues concerning neglect of self-care, prioritizing care of others, lack of supportive relationships with reciprocal caring, not feeling valued, feeling responsible for everyone else, feeling pressured to be how others wanted, no time for self, loss of self, experiencing criticism from others, dealing with current or past abuse/neglect, and feeling stuck. These factors point to how these women interacted in relationship with others who depleted them. If women, particularly mothers, follow socially prescribed gender roles encouraging women to self-sacrifice and put self last, patterns of expectations are set up in relationships that are hard to change and

can leave women vulnerable to depression. These results suggest, that in our work with women, we enquire about appropriately balanced self-care/other-care, and whether women need help learning to set boundaries and limits with others, encouragement to be assertive, and support to identify and seek relationships with reciprocal caring where they will be respected and valued.

Keywords: *depression, women, caring, recovery*

Psychological type - it's worth another look: Evidence from different settings

Chair(s): BALL, I. (Deakin University)

Discussant(s): GEYER, P. (University of South Australia)

There are several reasons why psychological type is worth another look. In recent years there have been serious efforts to strengthen the measuring process resulting in increased reliability and construct validity. Reliability generalization has been convincingly demonstrated, with strong internal consistency and test-retest reliability estimates. Recent forms of both main instruments (Myers Briggs Type Indicator and Psychological Type Inventory) now feature item response theory yielding four factors as distinct, well defined constructs: extraversion—introversion (E-I), sensing—intuition (S-N), thinking—feeling (T-F), and judging—perceiving (J-P). Additionally there have been advances made in type theory, for example, identification of interaction styles, the linking of type with archetypes, as well as the exploration of five facets for each of the four preferences, which add significantly to face validity for end users as well as increased opportunities to recognize differences in the expression of type. There has been research which indicates that although type explanations and trait explanations share some common variance, they are best regarded as different conceptions of individual functioning, serving different purposes. There is now wide evidence that type concepts have universality across cultures and between national groups, but with the caveat that the expression of type may differ due to cultural influences. Psychological type instruments are probably best construed as tools for personal and organizational development, and this is reflected in training opportunities where more regard is now being paid to the application of type concepts for a wider range of clients. This symposium explores the application of psychological type concepts in four different settings: business, education, community and

government organizations. These studies indicate the usefulness of psychological type concepts across a range of settings. The presenters will report on research conducted in Australia and New Zealand. The three key learning objectives are: (1) To demonstrate how psychological type concepts can lead to a greater depth of understanding of individual differences (2) To facilitate the process by which participants can increase their knowledge of the applicability of type concepts in a variety of settings and purposes (3) To explore connections between ideas that have practical relevance for practitioners.

Incorporating psychological type into leadership development in a professional services environment

WHITE, S. (Peoplechange)

The intent of this paper is to study the effect of the introduction of psychological type through leadership development programmes in an organization that had previously provided only technical education as core curriculum. It was assumed that the natural skepticism inherent in their daily work might lead the participants and organizational leaders to be dismissive of opportunities to apply psychological type knowledge to their job. The sample for this study was five cohorts ($N = 114$) of managers nominated for in-house leadership programmes within a major professional services firm from 1996-98. The MBTI® was chosen by senior management as the tool for self-knowledge. The first module of seven focused fully on type theory and applications. Action learning was employed in each of the modules which were conducted over a 12-15 month period for each cohort. This approach reflected the desire for the small groups to take on organizational issues that they believed needed a solution and to work proactively over the course of the programme. Senior managers provided very public support for the need for participants to develop greater self knowledge and this set the agenda for the incorporation of psychological type concepts. The writer was employed as the programme learning adviser for the five cohorts. It was found that the five highest frequency types represented 70% of participants. These were

ISTJ, ESTJ, INTJ, ISTP and ENTJ. Senior managers showed more introversion preferences compared to junior managers. Case studies of two business units within the firm will be reported where psychological type knowledge and concepts from the leadership programmes resulted in developments in the methodology of technical work, and successful management of change. Particular outcomes relating to the issues of stress management, team analysis and communication styles will be reported. These outcomes demonstrated the positive effects of the incorporation of the psychological type knowledge within the units. Ten years later psychological type is still used in the learning curriculum of this organization and confirms the acceptance of self-knowledge through a psychological type instrument and the use of that knowledge on the job in daily interactions with staff and clients.

Keywords: *psychological type, leadership, stress management*

Interaction styles and multiple intelligences: are there relationships?

PERRY, C. (Deakin University)

The intent of this study was to see what differentiation may exist between the four Interaction Styles as detailed by Linda Berens (2001) and the seven intelligences as first specified by Howard Gardner (1983). The use of the term talents or skills by both Berens and Gardner suggests that there may be some overlap of their concepts. The sample of the current study consisted of the entire cohort of the third year of a teacher education degree course at a University in metropolitan Melbourne, Australia ($N = 336$). In their studies of Individual Differences, these beginning teachers completed the Myers-Briggs Type Indicator (MBTI) and the Multiple Intelligence Checklist for Adults (MICA). The students agreed to donate their results to the study. The four Interaction Styles were identified from the MBTI: In-Charge, Behind-the-Scenes, Chart-the-Course, and Get-Things-Going. Variations in MICA scores within-subjects were examined by MANOVA with the Interaction Styles as the between-subjects variable. Distinct patterns of the Interactions Styles showed different relationships for four

of the seven intelligences: Musical, Logical-Mathematical, Bodily-Kinesthetic, and Interpersonal. These significantly different results add to the value of including both concepts in the descriptions of individual differences. The data confirm that the concepts of Interaction Styles and Multiple Intelligences are distinctive. The evidence from this study indicates that those with particular Interaction Styles do in fact show systematic differences in the use of the range of multiple intelligences. The evidence supports the idea that these two constructs, i.e. Interaction Styles and Multiple Intelligences, do not overlap, but manifest different patterns of usage of the intelligences across the interaction styles. The indications are that for different types of teachers favouring the use of a particular interaction style, there seem to be variations and differences in the patterns of use of the intelligences.

Keywords: *interaction styles, multiple intelligences, Individual differences, Multiple Intelligence Checklist for Adults, Myers-Briggs Type Indicator*

Organisational culture: Pressure to conform or opportunity for personal growth?

BATHURST, J. (The Open Polytechnic of New Zealand)

The aim of this study was to examine the culture of the Salvation Army and its effects on its Officers. If the culture of The Salvation Army pressures its Officers to conform, it would be expected that best fit preferences and the preferences of those attending more than once would drift towards the observed organizational preferences for E, S, F and J (representing an outgoing, rule based caring organization). If the culture is supportive of personal development, the best fit and repeat preferences would drift towards an individual's true preferences. Salvation Army Officers in New Zealand are expected to take part in MBTI workshops in order to understand themselves, their congregations and clients. This provides an extensive data set for analysis. In total, 971 Officers have taken part in these workshops over 18 years. For 59% of the Officers, both reported and best fit preferences are available.

Also, 43 Officers took part in the workshops twice and their data allows for some test-retest comparisons. Three Officers took part three times providing additional checks. Results from this study show that the "average" preferences for Salvation Army females are I, S, F and J, while those for males are I, S and J with T and F preferences being evenly distributed. The best fit preferences show an agreement of 81% with reported preferences. The patterns of changes show 60 changes towards the modal preferences and 75 away from them. This tends to confirm that the organization is not exerting pressure for Officers to have particular type preferences. Closer examination of the test-retest data raises some interesting questions about reliability of preferences over time. Some have changes to three or even all four preferences over five or six years. There is no evidence that the tendencies are towards the modal or organizational preferences. Results tend to show that the culture of The Salvation Army is supporting the personal development of its Officers rather than requiring them to conform to any

Keywords: *Salvation Army, Personal development, Group expectations, Organizational preferences, Culture*

Seeing is believing: affirmation of psychological type differences through observation in workshop activities

KERR, P. (Queensland Government)

C. G. Jung arrived at his theory of psychological types empirically, by observation of people over two decades. Some critics, however, dismiss the 'typical differences' described by Jung as manifestations of the 'type fallacy' or the 'Barnum effect'. The aim of this study was to confirm that the type differences described by Jung are distinct, demonstrable, and consistent with the defining features described by the developers of the Myers-Briggs Type Indicator (MBTI). A group of government agencies collaborate each year to recruit graduates in a professional field. The recruits undertake an induction program, including an introductory workshop on the Myers-Briggs Type Indicator (an application of Jung's theory). For most, that is their first exposure to psychological type concepts. Participants

provisionally self-select their 'preferences' on each of the MBTI dichotomies (extraversion—introversion, sensing—intuition, thinking—feeling, judging—perceiving), guided by descriptions of each dichotomy and their MBTI scores. They then split into 'type alike' subgroups for each dichotomy in succession to undertake role-plays designed to illustrate the differences on each dichotomy. Across two annual cohorts of graduate recruits ($n = 79$), textual analysis of the written outputs generated by the 'type-alike' subgroups (split between each of the four MBTI dichotomies) tended to confirm that the word choices and styles of expression manifested by each of the subgroups was consistent with the language and behaviour patterns characteristic of the polar preferences on each dichotomy, as described in the MBTI manual and associated reference materials. This analysis is supported by the distinctive group behaviours observed during the workshop activities. This study offers empirical evidence that individuals who self-identify with one or the other of each of the dichotomous type preferences described in Myers's and Briggs's adaptation of Jung's theory do, in fact, demonstrate language and behaviour consistent with that predicted by, and described in, the MBTI literature.

Keywords: psychological types, Myers-Briggs Type Indicator, Jung, group behaviour, textual analysis

Psychologists working with substance use: What are the challenges and do we have the training?

Chair(s): MAGOR-BLATCH, L. (University of Canberra)

This symposium considers the growing area of concern for psychologists in working with clients with substance use. Once considered to be the domain of specialist services, psychologists in private practice as well as those in specialist services, are being asked to address a range of issues associated with the use and misuse of alcohol and other drugs. This includes both illicit drugs and licit drugs which may be used illicitly, such as prescription drugs. In 2007, nine out of every ten (89.9%) Australians had consumed a full serve of alcohol in their lifetime. Marijuana/cannabis had been used at least once by one-third of Australians aged 14 years or older and over one-third of the population of Australians aged 14 years or older had used an illicit drug. Pain killers had been used for non-medical purposes by 4.4% and tranquillisers by 3.3%. By comparison, just 1.6% of Australians had used heroin at some point in their lives. While some substance users will require the support of specialist alcohol and other drug (AOD) services, (e.g., detoxification, outpatient counselling, residential rehabilitation), many will present to private practice through referral from General Practitioners, often without acknowledging that they have a substance use problem. The symposium will firstly pose the issue of training for psychologists – do we have the training to prepare us for this work, and if not, what needs to be done in order to equip psychologists to undertake counselling in this area? We will then look at specific examples of work areas of concern to psychologists. This includes: the misuse of pharmaceutical drugs and the implications for psychologists in recognizing and working with people who are dependent on prescription medications; working with AOD users in a correctional setting; and the challenges in working with families – stepping

outside the counselling room into outreach work. This will also throw up the issue of, “who is my client?” The learning outcomes for attendees of this symposium are that they will develop: an understanding of the challenges and rewards of working in the AOD field; an understanding of the training needs required to work with substance-using clients; knowledge of the work being undertaken in the field in a variety of settings and jurisdictions (Western Australia, Victoria and Queensland); and some knowledge of the research currently being undertaken in working with AOD populations.

Alcohol and other drug use and psychological practice: Seeing the wood and the trees

RYDER, D. (Edith Cowan University)

To highlight the lack of appropriate education and training in alcohol and other drug issues provided by postgraduate university courses in psychology and discuss reasons why this should be improved. The paper will review training in alcohol and other drug issues in postgraduate psychology courses and key developments in the alcohol and other drug field. The major reasons why such training needs to be central in psychology training will be highlighted. The major points supporting the argument for an increased emphasis on alcohol and other drug issues are: (1) Most clients of mental health services, a major area of employment of psychologists, experience comorbid alcohol and/or other drug use disorders. The reverse is also the case, with the majority of clients of alcohol and other drug use agencies experiencing mental health disorders. In most instances, alcohol and other drug use is not addressed in mental health services and where it is addressed, referral to another agency is the likely outcome. The same applies in alcohol and other drug services, where mental health issues are not addressed. This, it is argued, is inconsistent with the best interests of the client. (2) The core skills required for addressing alcohol and other drug issues are little different to those required for addressing mental health issues. Psychologists who have good counseling skills and an understanding of cognitive-behavioural approaches can, with appropriate education,

readily adapt their skills and the fact that alcohol and other drug issues are not addressed as a matter of routine practice is seen as a question of confidence rather than competence. There are many developments in the alcohol and other drug field that can enhance psychological practice more broadly. Two of these – motivational interviewing and harm reduction – will be briefly discussed. To provide the best possible care for clients, psychologists need to address alcohol and other drug issues as routine practice. To enable them to do this, tertiary training courses should include this as part of the curriculum and this should be included as a requirement for accreditation of these courses.

Keywords: *mental disorders, training, alcohol, drug use, postgraduate psychology courses*

The rise of pharmaceutical opioids as drugs of misuse – ‘hillbilly’ heroin has come to town

LOVEDAY, B. (Queensland Health)

The misuse of pharmaceutical opioids in Queensland population has significantly increased over the last five years mirroring trends in the USA. Historically, opioid drug misuse has mainly been confined to illicit injecting heroin use. However, the widespread prescribing of pharmaceutical opioids exposes a greater population to possible opioid misuse and dependence. Many of this population might not have had any connection with the illicit drug using milieu. The aim of this discussion is to outline the converging evidence that suggests there might an emerging drug misusing population and discuss the similarities and differences this population with illicit opioid drug misusers and the possible challenges to treatment providers in this area. Prescribing trends of opioid analgesic drugs (i.e., morphine and oxycodone) from Queensland Health prescription records are analysed for the general population showing the increasing volumes of opioids prescribed per person over the last five years. Also examined are Queensland Health records of patients entering into formal opioid substitution programs, for treatment with methadone & buprenorphine, and who have declared pharmaceutical opioids as their

primary drug of dependence. Results show that there is a significant population of persons receiving opioid analgesics drugs, above accepted therapeutic doses. Many of these persons exhibit drug seeking behaviour by 'doctor shopping' and could be considered dependent. However these drug users are not shown to have been involved in formal opioid treatment programs, nor have illicit drugs use histories. Potentially a new population of drug dependent persons is emerging that will be significantly different to previous opioid misusing populations. This population is dependent on chemically similar substances to illicit heroin and many similar treatment approaches would seem appropriate. However, many of these persons might present challenges to treatment providers as many will have commenced therapies for genuine medical conditions and thus might be more resistant to traditional drug dependence treatments. Implications for further research and treatments are discussed.

Keywords: opioid drug misuse, dependence, illicit drug use, treatment, drug seeking behaviour

Demonstrating the efficacy of an intensive psychotherapy group for drug and alcohol users within an adapted therapeutic community

BEEKEN, S. (Caraniche, Marngoneet Correctional Centre)

Marngoneet is a 304 bed medium security correctional facility located in Lara. The Station Peak neighbourhood is a dedicated drug and alcohol treatment neighbourhood where all therapeutic intervention is provided by Caraniche, a specialist forensic psychology company. The neighbourhood houses 102 men supported by a team of custodial staff and Caraniche clinicians with therapy, community living and work the focus of daily living. This presentation will outline the unique and innovative treatment provided by the 130 hour AOD program and discuss the quantitative and qualitative outcomes seen for the 74 men who have completed the group. Repeated measure T-Tests on psychometric outcomes for the Trauma Symptom Inventory, Psychological Inventory of Criminal thinking Styles, Carlson Psychological Survey, Situational Confidence

Questionnaire and the Stages of Change Questionnaire demonstrate changes following inclusion in the 130 hour D&A Program. Qualitative examples of activities undertaken by the men from the 130 hour D&A program demonstrate implementation of skills learned and discussed within the 130 hour program. Post treatment two subscales on the Carlson Psychological Survey; the Anti-social Tendencies and Thought Disturbance have decreased significantly. On the Stages of Change questionnaire, the results show a significant increase of the average score of the action stage, suggesting that prisoners are more likely to actively pursue change with regard to their substance use. Seven of the eight subscales of the Situational Confidence Questionnaire had been significantly improved, suggesting effectiveness in addressing substance use issues and in installing confidence to manage difficult situations without using drugs or alcohol. The TSI data shows significantly decreased average scores on six of the ten clinical subscales. Participants reported feeling less anxious and irritable. They were less likely to avoid painful thoughts and memories, less likely to experience intrusive posttraumatic reactions, and less likely to self harm. The PICTS also identified reduction on a number of subscales indicating a shift in criminal thinking style. The data shows a clear improvement on psychometric measures of criminogenic and non-criminogenic behaviour. Limitations of the data are acknowledged, most specifically the psychometrics do not capture the effect of the Therapeutic Community, which we readily acknowledge has a supporting impact on the process of change.

Keywords: correctional facility, therapeutic intervention, Caraniche, substance use, therapeutic community

Leaving the counseling room: Family home visiting where parents have alcohol and other drug addictions

GRUENERT, S. (Odyssey House, Victoria)

Most of our training as counseling psychologists prepares us to work with an identified client in a controlled setting. Move away from this setting, and the skills and

expertise of other professions such as social workers, becomes a useful addition to the psychologist's toolkit. This presentation aims to outline the type of work conducted with children and their parents in their Melbourne homes, when parents have drug and alcohol addictions, as well as a range of mental health, legal, and other problems. Case examples, children's voices, and research findings will be used to highlight the context of this work and explain the common strengths and gaps of psychological training. Psychological training prepares us well for the identification and assessment of issues, the emotional containment of clients, and supporting clients to draw upon their internal resources to find solutions to their problems. Where clients have drug and alcohol addictions, parental responsibilities, child protection issues, blurry boundaries, and low internal resources, work becomes complex and good knowledge of other providers and welfare systems is critical. Psychologists who plan to work in outreach roles with this population would be wise to consider placement experience in similar settings with a range of different professionals to sharpen their self care, systems and community services knowledge and skills.

Keywords: psychological training, counselling psychologists, assessment, drug addictions, alcohol addictions

Psychology and communities: Expanding psychology's roles, influence, and value

Chair(s): KELLEY, J. (American Psychological Association)

Social marketing has long been seen by American public health organizations and the United States federal government as the best approach to encourage behavior change and promote disease prevention. For more than a decade, the American Psychological Association (APA) has invested in social marketing initiatives and strategic partnerships to inform Americans about the value of psychological services and the role of psychologists in treating mental health disorders and the behavioral and emotional components of acute and chronic physical disorders, as well as psychology's role in disease prevention and health promotion. Over the years, APA has confronted stigma in America and encouraged individuals with psychological problems to seek help. Today, through multi-faceted social marketing campaigns, APA is promoting the mind-body connection and the development of psychologically healthy workplaces. These efforts are designed to help the public understand the central role psychologists play in disease prevention and health promotion as well as their skills in addressing an individual's behavioral and emotional issues. This is a particularly important message as people in America debate the future of health care in the United States and the role psychologists should assume in treating health problems, such as diabetes, obesity and chronic pain. This symposium will address the following components of APA's social marketing efforts: grassroots outreach, the media campaign, outreach to the employer community, outreach to stakeholders, and the building of strategic alliances. Learning Objectives include: 1) Provide Psychologists with effective strategies used by APA for community outreach and collaboration with other community based organizations; 2) Provide Psychologists with effective media strategies to reach the public; 3) Provide

Psychologists with strategies their organization can use to partner with the business community to improve employee psychological well-being and organizational performance; 4) Provide Psychologists with strategies to develop important partnerships with outside groups, through which a disease prevention, health promotion agenda can be furthered.

Reaching Americans through the media

KELLEY, J. (American Psychological Association)

The Public Education Campaign of APA has been focusing on the connection between mind and body health. The increase in obesity, heart disease, and stress in today's society has been linked to one's psychological and emotional health. APA's consumer research has demonstrated that Americans are increasingly aware of the connection between behavior and health, that they are recognizing the role that behavior plays in managing stress and contributing to the course of chronic illness, and that they understand the influence and value of psychological health on overall mind/body health and disease prevention. This presentation will focus on two national "Stress in America" surveys that were conducted in 2008 and 2009. The surveys provided insight on leading sources of stress for Americans, addressed the effects of stress on physical and emotional well-being, and focused on trends in the ways in which Americans attempted to manage their stress. The 2008 "Stress in America" survey garnered media coverage for APA and psychologists valued at over \$4.5 million dollars. After only a few days of the release of the survey, it had garnered nearly 800 news stories and media coverage. In just the first few days of the release of the 2009 survey, it had reached nearly 28 million people through 850 stories on TV, radio, in newspapers, blogs and news and health Web sites. APA has become a leading resource on stress for the media. The media coverage from these surveys has positioned APA and psychologists as a leading resource on stress for the media.

Keywords: public education campaign, obesity, heart disease, stress, chronic illness

Psychologists grassroots outreach

GOODHEART, C. (American Psychological Association)

In this presentation two effective models for community grassroots outreach will be presented, the mind/body health fair and collaborative efforts with the YMCA. The Practice Organization of APA conceptualized and organized The Mind-Body Health Fair and it was presented in a major United States city. With this pilot and test model, potential challenges were identified and addressed. A "how to" toolkit was developed for the state, provincial and territorial psychological associations (SPTA's) to utilize and tailor to their own specific needs, based on the geographical location and the population they are attempting to target. This presentation will address how the health fair was developed, and ways in which it can be personalized and modified to meet the specific needs of diverse communities. The YMCA of the USA and APA have combined efforts to work on initiatives to promote health and wellness. This collaboration has been seen by many as a natural fit, since both APA's Mind/Body Health and the YMCA's Activate America and Healthy Family Home public education campaigns focus on the important contribution of lifestyle and behavior to physical and mental health. Partnering with the YMCA has provided APA with a unique opportunity to reach a large audience and directly connect psychologists with the public as there are 2,663 YMCAs in America, serving more than 20.2 million people.

Keywords: community grassroots outreach, The Mind-Body Health Fair, Healthy Family Home public education campaigns, lifestyle, mental health

Psychologically health workplace program

KELLY, J. (American Psychological Association)

This component of the presentation will address the development of the Business of Practice Network with emphasis on the formation of the Psychologically Healthy Workplace award program. APA's Public Education Campaign's focus on the

contribution of lifestyle and behavior to stress management reinforces APA's Psychologically Healthy Workplace program messages linking employee well-being to organizational performance and has created an opportunity for a natural partnership between the programs. This campaign helps businesses understand the importance of positive mental health within the business community, and how a psychologically healthy workplace can impact business success. Through the campaign, APA works with its affiliated state, provincial, and territorial psychological associations (SPTAs) to carry out their local Psychologically Healthy Workplace programs. Today, 52 SPTAs have a Psychologically Healthy Workplace Program (PHWP), more than 400 organizations have been recognized locally and 80 organizations have received national recognition from APA, expanding psychology's marketplace visibility with employers. Between 2007 and 2008, APA and its affiliated SPTAs distributed approximately 54,000 PHWP brochures and more than 26,000 Psychologically Healthy Workplace Awards magazines to employers, the public and the media.

Keywords: Business of Practice Network, Psychologically Healthy Workplace award program, lifestyle, stress, media

Connecting with stakeholders and building strategic alliances for psychology's future

KELLY, J. (American Psychological Association)

This presentation will discuss the Future of Psychology Practice Summit that was a major Presidential initiative of the 2009 APA President. A major goal of the Summit was to assemble leaders in the practice of psychology and other professionals who are critical stakeholders to the practice of psychology to address the following objectives: 1) Models and opportunities for future practice to meet the needs of our diverse public; 2) Priorities for psychologists practicing in private and public settings; 3) Resources needed to effectively address the priorities; 3) Roles of various practice groups in implementing the priorities; and 4) Key partnerships to implement the psychological agenda. The Summit was a

collaborative effort among different partners of the practice community. APA collaborated with non-psychology groups to incorporate a broader public perspective into our work. It was felt that developing partnerships with these outside groups would be key to implementing psychologists' practice agenda.

A primary outcome of the Summit was the development of a clear agenda for the future of our multi-faceted and diverse practice community.

Keywords: Future of Psychology Practice Summit, diverse public, psychologists

Psychology, ethics and social justice

Chair(s): PETTIFOR, J. (University of Calgary)

Discussant(s): TASSELL, N. (Massey University)

The main objective of this presentation is to explore the meaning of the concept of social justice as an ethical responsibility of psychologists. The first presentation reviews how the concept of social justice has been understood historically from ancient times to the present, and how health professions have responded. The findings indicate a wide range of activities by psychologists that can be construed as working for a more equal, fair and just society. There is also a wide range and degree of injustice and suffering in the world. In the western world there is a stronger emphasis on individualist values, while in many other countries, the societal and collectivist problems take priority. The role of the clinical supervisor in North America in enhancing the multicultural competence of practitioners is described. One of the greatest injustices of our times is the continuing racism and neglect of Aboriginal/Indigenous peoples resulting from having been conquered and colonized by more powerful nations. Two diverse examples of psychologists responding to such injustice are presented, namely from South Africa, and from Australia and Torres Strait Islanders. The conclusions are that psychologists have, and should have, an ethical responsibility to work for social justice and against practices that violate their ethical principles. There are many ways, both individually and collectively, in which psychologists can work with others in contributing to greater justice and harmony in the world. Despite many dark spots, there is increasing awareness and actions world wide to build a more just society. Psychology has much to contribute.

The history of the concept of social justice in professional ethics

SINCLAIR, C. (Hincks-Dellcrest Centre)

The purpose of this presentation is to trace the history of the development of the concept of social justice from before the time of the Hippocratic Oath to modern times, and to demonstrate that over the centuries the professions have expressed a sense of responsibility to the broader community and a concern for the personal and social wellbeing of all members of society. In researching this topic, various sources were used, including various oaths and codes of ethics over time, as well as historical documents concerning concepts of human rights, equal opportunity and benefit, and attention to the needs of the vulnerable and economically disadvantaged. Historical precedents led to modern-day definitions of social justice. In addition, it will be shown how the suggestion that professions have a responsibility to pursue social justice has occasionally been met with ambivalence if not outright rejection by some professionals. Suggestions will be made regarding the reasons for such ambivalence, and for the apparent current commitment of psychologists to the principle of social justice nationally and internationally.

Keywords: social justice, well-being, human rights, equal opportunities, codes of ethics

Supervision and social justice: A view from North America

FALENDER, C. (UCLA and Pepperdine Universities)

This presentation will explore the concept of social justice as an ethical value in clinical supervision. Various ethics codes and guidelines from the American Psychological Association and the Canadian Psychological Association will be reviewed regarding their attention to responsibility to society and commitment to social justice. Through the use of vignettes and exercises aspects of supervision will be identified that provide added impetus for working for social justice. Various ethics codes and guidelines support the ethical principle of responsibility to society while there continues to be some confusion regarding the concept of social justice. However, the attitudes and values of supervisors, supervisees and practitioners are receiving increased attention along with the encouragement to show empathy for others.

The task of the supervisor is to assist the therapist/supervisee in understanding and using feelings and attitudes toward multiple cultural identities of the client in the context of his/her multiple cultural identities and attitude towards social justice. This entails enhanced self-awareness, with clarity of the impact of self upon the client and upon the supervisory process. Social justice is an implicit ethical value in clinical supervision. Supervisory roles that support ethical practice in the interests of social justice will be clarified.

Keywords: *social justice, ethics, empathy, clinical supervision, ethical practice*

Narrative ethics in action: A case study from South Africa

GOBODO-MADIKIZELA, P. (University of Cape Town)

This presentation will explore a narrative approach to ethics using as context the role played by Cape Town psychologists in the aftermath of the xenophobic violence that broke out in South African townships in May 2008. The paper examines some of the stories that emerged from psychologists' work in the safe sites for displaced persons who were forced out of their homes in major South African townships. The focus on narrative as the field of discussion of ethics offers a broader moral framework for reflection on the ethical dilemmas that psychologists encounter in the social and political world. This framework places the experiences of communities, rather than abstract principles, in the centre of professional practice and opens up the possibility for action where psychologists can become social change agents. The presentation will conclude by pointing out the potential challenges that may emerge when there is a blurring of distinction between narratives of psychologists and of the vulnerable groups they serve.

Keywords: *ethics, ethical issues, social change agents, violence, narrative approach*

Aboriginal psychology organizations for social justice

DUDGEON, P. (Australian Indigenous Psychologists Association)

This paper will explore the philosophy and roles of Indigenous Australian Aboriginal and Torres Strait Islander psychology organizations in the promotion of mental health for Aboriginal people and for societal changes that are fair and just for all citizens. This aim is in recognition of the great injustices in the world of racism and neglect of Indigenous peoples that have been conquered and colonized by more powerful nations. The authors have been deeply involved in Aboriginal social justice issues for many years. With the advantage of their experience they have taken a specific organization as an example of Aboriginal psychologists working for social justice. The members of the organization recognize that colonization has resulted in social, political and psychological disadvantages and suffering. They are committed to change within a framework of Human Rights. They believe that change requires shared partnerships between Indigenous and non-Indigenous colleagues. Reconciliation requires a sharing of power. The goal is a shared country where people work together to bring about social change that will create a better future for all. Strategies are used to bring about equal and harmonious relationships. Good progress is being made as Indigenous people have access to higher education and access to more powerful positions in society. The conclusion is that Aboriginal psychology organizations are effective in bringing about change. Two questions are raised for discussion: How can psychologists contribute to social justice for indigenous peoples? How similar world-wide are the issues for Aboriginal/Indigenous peoples.

Keywords: *Indigenous, Aboriginal and Torres Strait Islander, racism, social justice, reconciliation*

Psychometric and taxometric models in epidemiological datasets to inform DSM-V

Chair(s): BAILLIE, A. (Centre for Emotional Health, Psychology Department, Macquarie University)

Discussant(s): HAMBLETON, R. (University of Massachusetts at Amherst)

This symposium presents research concerned with the empirical reevaluation of the DSM-IV diagnostic system. Papers within the symposia address whether specific mental disorders are best conceived of as dimensions or categorical classifications, whether specific comorbidities might show as different symptom profiles, and whether specific diagnostic criteria show any bias for important groups in the community. Key Learning Objectives include: Demonstrate psychometric and taxometric techniques for evaluating diagnostic systems; improve symposium participant understanding of Item response theory methods for evaluating item bias; demonstrate new Factor Mixture Models for comparing categorical and dimensional models.

Investigating differential symptom profiles in major depressive episode with and without generalized anxiety disorder

SUNDERLAND, M. (School of Psychiatry, University of New South Wales), MCBRIBE, M. (University of Ulster at Magee Campus), TEESSON, M. (National Drug & Alcohol Research Centre, University of New South Wales), SLADE, T. (National Drug & Alcohol Research Centre, University of New South Wales)

Large community based epidemiological surveys have consistently identified high comorbidity between major depressive episode and generalized anxiety disorder. Some have suggested that this co-morbidity may be, in part, an artefact and the product of the current diagnostic system. Due to the added direct and indirect patient costs associated with comorbidity it is important to investigate if

methods of diagnostic assessment are artificially increasing the level of observed comorbidity. The current study aims to examine whether symptom similarity between major depressive episode and generalized anxiety disorder is contributing to the observed comorbidity found in epidemiological studies. The item response theory log-likelihood ratio procedure was used to test for differential item functioning of major depressive episode symptoms between respondents with and without a diagnosis of generalized anxiety disorder in the 2001-2002 National Epidemiological Survey on Alcohol and Related Conditions. The presence of generalized anxiety disorder significantly increased the chances of reporting any symptom of depression with odds ratios ranging from 2.54 to 5.36. However, there was no indication of significant differential item functioning of major depressive episode symptoms in respondents with and without generalized anxiety disorder. The lack of any significant differential item functioning indicates that the reporting of symptoms used to assess major depressive episode are not biased toward respondents with or without generalized anxiety disorder. The findings of the current study do not support the hypothesis that conceptually similar symptoms are partly responsible for the high co-morbidity between major depressive episode and generalized anxiety disorder. Instead, major depressive episode and generalized anxiety disorder may be thought of as two distinct diagnostic entities that commonly co-occur due a shared underlying trait.

Keywords: *major depressive disorder, generalised anxiety disorder, comorbidity, diagnostic assessment, epidemiological studies*

“Youthful epidemic” or diagnostic bias? Differential item functioning of DSM-IV cannabis use criteria in an Australian general population survey

MEWTON, L. (National Drug & Alcohol Research Centre, University of New South Wales)

Studies have consistently shown that prevalence rates of cannabis abuse and dependence are higher for younger adults when compared with older adults. It is

necessary to examine the performance of criteria across age groups to establish whether these differences in prevalence rates are a result of diagnostic bias. The current study aims to investigate whether there is any age-related differential item functioning in the DSM-IV diagnostic criteria for cannabis use disorders using an item response theory approach. The sample consisted of 10641 participants in a population-based survey of Australian adults aged 18 years and older. DSM-IV cannabis use disorders were assessed in all 722 respondents who indicated that they had used cannabis more than five times in the previous twelve months. Age-based differential item functioning was assessed in each of the DSM-IV criteria for cannabis use disorders. Age-based differential item functioning was only detected in the Hazard criterion of the DSM-IV cannabis use disorders. The α parameter for the Hazard criterion was more discriminating for those aged 18-24 when compared with those aged 25 and over. The DSM-IV criteria for cannabis use disorders appear to function similarly across age groups. Differential item functioning was only detected in the α parameter for the Hazard criterion. These results are discussed with regard to implications for future editions of the DSM system.

Keywords: *cannabis abuse, dependence, DSM-IV diagnostic criteria, performance, diagnostic bias*

Measurement Invariance in Social Phobia?

VALPIANI, E. (Centre for Emotional Health, Psychology Department, Macquarie University)

Social phobia, characterized by a fear of negative evaluation or embarrassment, is one of the more prevalent disorders in community samples. It has an early onset and chronic course, and is associated with negative psychosocial outcomes and co-morbid disorder. Typically, more females report social phobia than males; however, comparisons between males and females is tenuous without establishing measurement invariance of diagnostic measures. Measurement invariance refers to respondents with equal levels of the latent construct (e.g. social phobia) responding in equivalent ways regardless of group

membership. Without measurement invariance, responses may be confounded by systematic response biases. This study aimed to establish whether differences in reporting of social phobia between males and females reflected real differences or measurement bias instead. The sample was a subgroup of respondents in a large scale Australian community survey (National Survey of Mental Health and Wellbeing (NSMHWB), 1997) who reported experiencing at least one social fear. Respondents were asked questions assessing DSM-IV diagnostic criteria via the Composite International Diagnostic Interview (v2.1). A series of hierarchical multiple group confirmatory factor analyses were conducted to establish measurement invariance. Logistic regressions were conducted as consistency tests and to further clarify relationships. Conditions for full measurement invariance were not met, which indicated that males and females differed in their responses to diagnostic criteria for social phobia. These discrepancies were primarily due to differences in the reporting of physical anxiety symptoms between males and females. Compared with females, males under-reported their experience of physical anxiety symptoms at low levels of social anxiety, and over-reported physical anxiety symptoms at higher levels of social anxiety. Accommodating these differences resulted in a strong partial invariance model. Males and females differ in their report of physical anxiety symptoms, which are required to meet diagnosis of social phobia on structured diagnostic measures. Whilst the reasons for this difference are unclear, and may include social pressures, differential experience of physical sensation or restricted measurement of anxiety when relying solely on physical symptoms in structured diagnostic tools.

Keywords: *Social phobia, comorbidity, measurement, diagnostic criteria, structured diagnostic tools*

The latent structure of posttraumatic stress disorder: a taxometric analysis

CARRAGHER, N. (National Drug & Alcohol Research Centre, University of New South Wales)

Considerable debate has centred on whether posttraumatic stress disorder (PTSD) is best conceptualized as a distinct clinical entity or the upper end of a stress-response continuum. With the advent of the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), nosological questions regarding the latent structure of mental disorders have assumed renewed relevance. Taxometrics is a family of mathematical procedures particularly suited to structural research. Extant taxometric studies yield support for a dimensional model of PTSD. However, to the best of our knowledge there are no published taxometric investigations of posttraumatic stress reactions in general population samples. Accordingly, three taxometric procedures (MAXEIG, MAMBAC, L-Mode) were employed to delineate the latent structure of posttraumatic stress reactions in a traumatized subsample of respondents from the Australian National Survey of Mental Health and Wellbeing ($n = 2,677$). Findings converged on a dimensional model. Reconceptualising PTSD according to a dimensional model provides a more detailed picture of posttraumatic stress symptoms and has important implications for assessment, research, and treatment.

Keywords: post-traumatic stress disorder, stress-response continuum, Diagnostic and Statistical Manual of Mental Disorders (DSM-V), taxometric, dimensional model

Factor Mixture Models of DSM-IV Alcohol and Cannabis Use Disorder in Australian Community Samples

BAILLIE, A. (Centre for Emotional Health, Psychology Department, Macquarie University)

Substance use disorders in DSMIV have been evaluated as continuous dimensions with confirmatory factor analysis or as categorical constructs with latent class analysis. Recently Factor Mixture Models (FMM) have been developed which allow comparison of fit for dimensional or categorical models and models with a combination of dimensions and categories. In addition to comparing the fit of different latent structures we examined the relationship between existing and putative criteria and the preferred latent constructs. We

used FMM in MPlus to compare the fit of continuous, categorical and mixture models in cannabis and alcohol use disorders in the 1997 and 2007 Australian National Surveys of Mental Health and Wellbeing. In both 1997 and 2007 surveys there was no improvement in fit for categorical latent class, nor for mixture models combining continuous and categorical parameters compared to continuous factor models. The results indicated that both alcohol and cannabis problems can be considered as dimensional, with those with the disorder arrayed along a dimension of severity. Two factor models provided the best fit but with a very high correlation between the factors. A single factor model appears to be the most parsimonious account of the data. A dimensional dependence indicator may provide more information than the current categorical indicator. Some criteria appear to reflect a more severe state than was originally intended and could be revised.

Keywords: substance use, DSMIV, categorical constructs, cannabis abuse, alcohol use

Psycho-oncology: Making sense of cancer

Presenter(s): BURNEY, S. (Cabrini Monash Psycho-Oncology Research Unit, Cabrini Health)

In this symposium some recent examples of research that has been conducted in Melbourne will be used to showcase the issues that are faced by psychologists conducting research and providing clinical services in oncology settings. The key learning objectives are to compare and contrast the range of roles that psychologists adopt in the oncology treatment team; the barriers and enablers associated with the introduction of psycho-oncology services in both the private and public health systems; and the ongoing supportive care needs of cancer patients. Particular attention will be given to the supportive care needs of male cancer patients and of those patients whose cancer has returned. The symposium will conclude with a discussion of the future directions of psycho-oncology research and practice in Victoria by Jane Fletcher, the current chair, Victorian Cooperative Oncology Group, Psycho-oncology Committee. Jane is a practicing psychologist and researcher who has worked with cancer patients for many years.

It's like being a first class patient: A pilot study examining the experiences of patients participating in a cancer-related clinical trial

WOOTTEN, A. (Department of Urology, Royal Melbourne Hospital, Australia.)

To explore the experiences and identify the psycho-social support needs of patients enrolled in a cancer-related clinical drug treatment trial. This paper outlines a two-phased pilot study conducted at Royal Melbourne Hospital. 14 participants were recruited to Phase One in which three focus groups and two interviews were conducted. The focus groups and interviews were audio-recorded, transcribed and coded according to emerging themes. 19 participants were

recruited to phase two in which longitudinal data was collected across three time points; at the point of consenting to take part in the clinical trial, three months after commencing the clinical trial and six months after commencing the clinical trial. Participants experienced a mixture of hope, uncertainty and apprehension as they considered whether to take part in a clinical trial. At different stages of the trial they made sense of their participation by thinking about the possible benefits of participation. Trial participation was also associated with a number of emotional and practical challenges. The end of the trial was associated with a mix of emotions, including relief, disappointment, hope of future help, uncertainty and abandonment. Generally participants were very positive about the support they received from health professionals, family and friends. Clinical trial participation is, in general, a positive experience for many patients with cancer, although there are a number of associated practical and emotional challenges. Trial participants may benefit from closer follow-up from clinical trial staff, especially the treating doctor, assessment of support needs, and help in re-evaluating the meaning of their trial participation if their initial hopes and expectations are not met.

Keywords: *psycho-social support, cancer, clinical trial, emotional factors, hope*

Below the belt: Talking about life after prostate cancer. Results of a randomised controlled trial

SIDDONS, H. (Department of Urology, Royal Melbourne Hospital, Australia.)

The aim of this study was to evaluate the effectiveness of a psychological group therapy intervention entitled "Below the Belt: Talking about life after prostate cancer". A total of 65 men, who were on average 24 months post-radical prostatectomy, took part in an 8-week group intervention. Participants were randomly assigned to either a wait-list group or intervention group. The intervention group completed questionnaires at 8 weeks pre-intervention, on the first day of the intervention and at the completion of the intervention. The waitlist group completed

questionnaires at 16 weeks pre-intervention, at 8-weeks pre-intervention, on the first day of the intervention, and at the completion of the intervention. A paired-sample t-test was conducted which indicated a number of significant changes across the time of the intervention as compared to the 8 week wait time. Sexual arousal significantly improved ($t(56)=-2.49, p = .016$); Sexual drive and relationship quality significantly improved ($t(52)=-2.86, p = .006$); Sexual Confidence significantly improved ($t(57)=-9.12, p < .0001$); Masculine self-esteem significantly improved ($t(57)=2.07, p < .05$); The perception of Cancer Control significantly improved ($t(57)=2.54, p = .014$) and the perception of making an informed decision worsened ($t(55)=2.05, p < .05$). The mixed-between-within ANOVA used to compare the results of the intervention and wait-list groups over time revealed that sexual behaviour significantly improved over the period of the intervention as compared to the wait-list group Wilks Lambda = .79, $F(2, 29) = 3.95, p = .030$ as did sexual intimacy, Wilks Lambda = .84, $F(2, 43) = 4.03, p = .025$. The results, as well as qualitative information gathered throughout the intervention, indicated that not only do men benefit from participating in a structured group therapy program across a number of QoL domains but that they also enjoy it. Men reported feeling more confident in their sexual lives, more self-confident in terms of their masculinity as well as well feeling supported by group members. This study lends strong support to the need for appropriate and timely psychological interventions for men coping with sexual dysfunction and highlights the importance of psychological care in the cancer setting.

Keywords: *psychological group therapy intervention, effectiveness, prostate cancer, sexual behaviour, sexual dysfunction*

Screening for distress in the private sector: Establishing a screening protocol and referral pathway for Cabrini Health

FLETCHER, J. (Cabrini Monash Psycho-Oncology Research Unit, Cabrini Health)

The utility of screening for distress in oncology patients has been well documented. With the view of establishing screening for distress as

part of routine clinical practice at Cabrini Health, the Cabrini Monash Psycho-Oncology Research Unit set to assess the feasibility and acceptability of screening for distress in chemotherapy patients. 123 patients receiving chemotherapy at Day Oncology (Brighton or Malvern) or Ward 2C completed a self report questionnaire between May and September 2009. The project utilised the National Comprehensive Cancer Networks Distress Thermometer (DT) and problem checklist, the Kessler Distress Scale (K10), questions relating to satisfaction with the distress measures and a series of medical and demographic items. Participants included those with a breast (29%), haematological (22%), bowel (20%), lung (12%) and gynaecological (10%) cancer diagnosis. Over a third of the sample (31%) had a previous cancer diagnosis. Based on the clinical cut off scores for distress, 38% were classified as distressed using the DT and 24% using the K10. Both the DT and K10 were seen as being 'easy' or 'very easy' to use by in excess of 80% of the sample. The DT detected a higher number of distressed patients than the K10 and identified 18 patients as distressed that the K10 failed to identify, while the K10 identified three patients as distressed that the DT did not. Results from the DT's problem checklist identified a range of physical concerns (fatigue 71%, constipation 41%), psychological problems (worry 41%, sadness 30%) and practical concerns (getting around 28%) for chemotherapy patients at Cabrini Health. Given the level of distress identified in patients undergoing chemotherapy at Cabrini Health and the satisfaction with and utility of the DT and problem checklist, the establishment of routine screening for distress in chemotherapy patients is seen as not only feasibility but acceptable to both patients and nursing staff.

Keywords: *distress, oncology, clinical practice, chemotherapy, screening*

The relationship of HPV knowledge, health value and health self-efficacy with men's intentions to receive the HPV vaccine

BURNEY, S. (Cabrini Monash Psycho-Oncology Research Unit, Cabrini Health)

The aim of the present study was to determine whether HPV knowledge, health beliefs and health self-efficacy could predict intention to receive the HPV vaccine in an Australian male sample. 121 males, aged 18 to 26 ($M = 22.3$, $SD = 2.06$) years and residing in Australia, completed an online survey assessing HPV-related knowledge, health beliefs and health self-efficacy. A multivariate linear regression analysis revealed that, as hypothesised, HPV knowledge and health self-efficacy were significant independent predictors of vaccine acceptance at the $p < .05$ level. Contrary to previous findings, health value did not significantly predict vaccination intentions. In addition, a moderating effect was found between HPV knowledge and health self-efficacy. This research was the first to examine HPV knowledge, health beliefs and health self-efficacy, and their relationship with HPV vaccination intentions, in a sample of Australian males. Previous research regarding HPV vaccination intentions has largely focused on females, and as a result the factors that influence males to undertake HPV vaccination were largely unknown. This study, despite its limitations, has offered some useful insights into some of the factors that are associated with HPV vaccine intentions in a sample of Australian men. It is hoped that the results of this research will contribute to evidence-based health promotion strategies leading to an increasing HPV vaccine uptake in this population. It is expected that in turn this will lead to “herd immunity” in the Australian population thus preventing future acquisition of HPV-related illness and mortality.

Keywords: health beliefs, self-efficacy, males, HPV knowledge, vaccination

Putting “people” back into job design

Chair(s): UNSWORTH, K. (University of Western Australia)

Discussant(s): PARKER, S. (University of Sheffield)

There has recently been a resurgence of research into job design. While the number of characteristics that have now been identified as important within a job has drastically increased, an understanding of the role of people is still lagging somewhat behind. In this symposium, leading job design researchers from the US, the UK, and Australia discuss these ideas. The first paper uses data from 311 employees and their supervisors to investigate how the relationship between the leader and a follower affects job design. Interestingly, the authors found that more positive relationships were associated with more positive job characteristics which then had knock-on effects to satisfaction, task performance and citizenship behaviours. The second paper takes a slightly different perspective on the role of people in job design. In this theoretical paper, the author identifies a new type of job design that uses customers to co-produce the job outcomes, for example passengers checking themselves in at the airport. The paper presents some highly intriguing ideas about the prevalence and the implications of this new type of co-production. The third paper focuses on an existing construct that explicitly focuses on the person in the job. As demonstrated by its citations, job crafting has captured the imagination of many in organizational psychology, yet little attention has been given to its mechanisms and nomological network. This paper defines job crafting as a form of self-regulation, and generates a number of interesting proposals on this basis. Finally, the fourth paper looks at how job design is used to help people, particularly in managing their stress levels. By using the results from a series of studies, the author concludes that while changes to objective job design results in small but predictable changes, the biggest changes may come from changing the person themselves – most notably for our

symposium, by changing the person's perception of the job and its context. Overall, the symposium highlights new and different ways in which people play a role in job design. The symposium includes both empirical and theoretical papers and together, they represent a significant advance in our understanding of job design.

Work design and social relationships: Exploring the role of leader-member exchange

MORGESON, F. (Michigan State University)

Past work design research has emphasized a set of task-focused work characteristics. More recently, scholars have called for a broader focus on socially oriented work design features (Morgeson & Campion, 2003; Parker & Wall, 1998). Although this call has been answered both empirically (Morgeson & Humphrey, 2006) and theoretically (Grant, 2007), there are many other relationally oriented aspects of the work environment likely to be important for work design and employee outcomes. This includes the nature of the relationship between leaders and followers. The quality of the relationship between leaders and followers has been shown to be related to numerous affective and behavioral outcomes (Gerstner & Day, 1997; Ilies, Nahrgang, & Morgeson, 2007). Yet, we are unaware of any research linking leader-member exchange (LMX) to work design. This is unfortunate because the role taking, role making, and role routinization stages that characterizes the development of leader-member relationships are likely to have significant implications for a role's work characteristics, in part because the testing episodes that result in high or low quality relationships will tend to lead to more positive (or negative) work characteristics. In turn, work characteristics are expected to be related to work outcomes such as satisfaction, task performance, and organizational citizenship behavior. We seek to explore these two possibilities across a wide range of work characteristics. We empirically examine these issues in a field sample of 311 full-time workers who hold a variety of different jobs. Job incumbents completed the Work Design Questionnaire (WDQ; Morgeson & Humphrey,

2006), which measures 18 work characteristics and job satisfaction. Supervisors provided judgments of job incumbent task and citizenship performance. Both sources provided ratings of LMX. As shown in our results, both incumbent- and supervisory-rated LMX is significantly related to numerous work characteristics, particularly the task and knowledge characteristics. This provides support for the idea that more positive leader-member relationships are related to higher levels of work characteristics. The work characteristics, in turn, are frequently related to satisfaction, task performance, and organizational citizenship behavior. Implications of these results for work design research and theory will be discussed.

Keywords: work design, relationships, leader-member exchange, leadership, followers

Towards a theory of collaborative work design

CORDERY, J. (University of Western Australia)

The scope of work design theory has recently been expanded to incorporate aspects of task, job and role content that derive from the social context within which work is performed (Humphrey, Nahrgang & Morgeson, 2007). Work characteristics that arise from tasks and activities involving interaction with others have been identified as playing a significant role in determining employee behavior, affect and well-being (Grant & Parker, 2009). In the main, theory and research in this area have focused on relational characteristics of jobs and roles as they are enacted and experienced by employees. Much of contemporary service work is collaborative in nature, however, with customers engaged in performing key tasks and activities interdependently with those performed by employees, as co-producers of service outcomes. The increasing frequency of such boundary-spanning collaborative work has significant implications for work design research and practice. In the first instance, it points to the need to consider how properties of tasks and activities that customers engage in as part of such collaborations affect their behavior and attitudes. Second, it opens up the possibility for research into the nature and effectiveness of collaborative work designs at

both dyadic and group levels, where membership of those collaborating units includes both employees and non-employees. In this paper, I document the rise of collaborative co-production work in service organizations, and present a theoretical framework designed to guide future research into collaborative work designs. This model identifies inputs at the individual, dyadic and group level that are likely to influence a range of effectiveness outcomes for this type of work.

Keywords: work design, work characteristics, well-being, relational characteristics, collaborative co-production work

Job Crafting: A further exploration of the construct and its relationship to job design and goal choice

UNSWORTH, K. (University of Western Australia)

The construct of job crafting (“the physical and cognitive changes individuals make in the task and relational boundaries of their work”) has gained widespread attention since its conception by Wrzesniewski and Dutton (2001). However, very little work has been done to further explore the construct and how it might work. In this paper, I suggest that job crafting is a form of self-regulation. This repositioning of job crafting allows us to: 1) identify a much broader range of job crafting strategies than those suggested by Wrzesniewski and Dutton (2001); 2) draw upon a literature that has identified some of the mechanisms and processes involved in affecting motivation and performance; and 3) examine how it interacts with job design. Based on control theory (Carver & Scheier, 1981), I suggest that job crafting is most likely to occur when there is a discrepancy between the task (performance) and personal higher-order goals (goal). Feedback from job crafting efforts will provide information as to the current level of discrepancy and, unlike current theorizing, I suggest that when the discrepancy is sufficiently reduced then job crafting will stop. Furthermore, based on Bandura (1986), I suggest that one’s self-efficacy to make changes will be a key factor – when an individual has low self-efficacy (due either to other individual characteristics or the situation

they are in), then they are unlikely to produce changes. To date, there is little understanding about how job crafting increases meaning, however, using the self-regulation literature we can draw upon research on goal choice and goal hierarchy. I suggest that job crafting strengthens the relationships between lower-order task goals and higher-order personal goals. Finally, I suggest a more sophisticated model of the relationships between job crafting and job design by separating behavioural job crafting (actually making changes to the job) and cognitive job crafting (thinking about the job differently). Most importantly, I suggest that cognitive job crafting will affect perceived job design but that, in contrast to behavioural job crafting and previous theorising, will not be reciprocally affected by the design of the job.

Keywords: job design, self-regulation, motivation, performance, control theory

Multilevel approaches to stress management: Trading off certainty with impact

MORRISON, D. (University of Western Australia)

When considering stress intervention strategies within organisational settings a variety of options are available to practitioners including job redesign, clarification of role relationships, developing coping skills, and employee assistance in terms of medical or psychotherapeutic treatment. It seems that many organisations focus on some but not all of the above when seeking to ameliorate the effects of exposure to stress. The most commonly used interventions appear to address stress in the work place at the individual level as opposed to assuming a broader perspective that incorporates organisational change of some sort. The question often asked is which approach is likely to be the most effective given that in one way or another all approaches are expensive. Evidence from a series of studies is presented which suggests that changes at the job level in objective job characteristics will have a modest but highly predictable outcome. The vast majority of variance in the stress experience is found at the individual level. Approaches to dealing with stress at work at the individual

level, such as skill development, improved selection and delivery of employee assistance, are more varied and less predictable in their impact perhaps because they interact with contextual variables. The stress experience seems largely to rely on individual perceptions of self and context and it is argued in this paper, therefore that it seems likely the biggest gains will be found with management/supervisor training in impression management of the context as well as employee perceptions of their work situation.

Keywords: *stress management, job redesign, role relationships, coping skills, individual level*

Quality of life in the span of development in inter continental perspective

Chair(s): FRESE, M (IAAP Department of Psychology University of Giessen)

Discussant(s): SINGH, A P. (Govt. M.L. B. Girls P.G. College Bhopal M.P.)

Globalization is leading the world to become one unit. The different continents are no longer a barrier to development. This is also encouraging the citizens of developing countries to move towards developed countries and as a result the problems associated with migrants are emerging. Transitional traumas and adjustment affect mental health in both positive and negative ways. This symposium will focus on the quality of life of the Indian population in terms of life span, development, and the inter-continental perspective. In this symposium the research paper represents a study based on longitudinal case studies about patient gender and life span development stages: adolescents, adults, senior adults, old aged. Data analyses consisted of correlational and comparative qualitative and quantitative analytical methods. Two papers focus on dual continental aspects while the other three focus on the status of women, cancer patients and community living older people in reference to quality of life. The key learning objectives are to understand the impact of Quality of life on different stages of life span development, to analyze the impact of migration on Quality of life, to analyze the impact of dual Continental living on Quality of life on different populations, to analyze the impact of community living on Quality of life in old aged multicultural populations, and to understand the importance of subjective Quality of life parameters in the Asian/Indian culture and mental health.

A comparative study on quality of life of Asian adolescents, adults and senior adults living as us citizens

PATEL, G. (YAI - National Institute for People with Disabilities New York City)

An “age relevant” concept of development (Baer, 1970) focuses not on the age at which a particular experience occurred but rather the point in sequence that the experience occurred. A significant role for life span developmental intervention lies in the identification of ageism and internalized age related norms. There is no single, universally accepted definition of Quality of Life (QOL; Lauer, 1999). The World Health Organization definition, for example, focuses on the subjective perspective (EHOQOL Group 1993), whereas other constructs are broader and include objective indicators of health, housing, and other material circumstances. According to recent reviews (Lauer, 1999), most researchers believe that both subjective and objective information is necessary to understand QOL. With such concerns in mind, this study was designed to investigate the relationship between QOL across three different stages of life span development (adolescent, adult and senior adult). The sample consisted of 30 randomly selected individuals of Asian background (15 Male, 15 Female) who were residents of the US and held US citizenship. Within this sample there were 10 adolescents (five male and five female) aged between 13 and 18 years, 10 Adults (five male and five female) aged between 21 and 28 years, and 10 Senior Adults (five male and five female) aged between 58 and 65 years. A QOL Scale, which was developed from Lehman's QOL scale (Olive et al., 1997), is a researcher-led questionnaire enquiring about objective life circumstances and subjective life satisfaction in nine domains — work/education, leisure, religion, finances, living situation, legal/safety, family relations, social relations and health — and it includes subjective ratings of overall well-being. The subjective satisfaction ratings were recorded on a seven point Likert scale (‘delighted - terrible’). The study found a significant difference between QOL and age groups. The difference was observed among males and females in the Senior Adult group. A two way interaction also indicated this difference. The study concluded that there is a difference in the level of subjective QOL and age groups. That is, the Asian senior adults who migrated from their native countries later in life reflects

low subjective QOL as compared to other groups who migrated at early age. Asian adolescents who are born in the US demonstrate a higher level of QOL at the objective level.

Keywords: *age, quality of life, well-being, adolescents, senior adult*

Quality of life in the span of development: Case study on dual continental perspective

SHARMA, A. (Multi linguistic Specialist South Eling), TYAGI, (Govt. M.L.B. Girls P.G. College Bhopal M.P.)

Development is not usually explained as an empirical term (Reese & Overton, 1970), however, on occasion it is (Kaplan, 1983). Many times what happens across the life span is what constitutes development. The concept of development centers on the value based notion of improvement. According to the life span perspective, development is a life-long, interactive, multidimensional, multidirectional, culturally, and historically embedded process that shows plasticity, involves both gain and losses and is a multidisciplinary field of study (Sugarman, 2001). Quality of life has been interpreted in many different ways, for example, it has been interpreted as satisfaction (Summers, 1976), happiness (Esterling, 1978), psychological wellbeing (Andrews & Withey, 1978), and degree of fulfillment of important goals (Frish, 1989). In Positive Psychology, the scientifically unwieldy notion of happiness is broken down into further quantifiable aspects: positive emotion (the pleasant life), engagement (engaged life), and purpose (meaningful life) (Seligman, 2008). In spite of globalization there is demarcation between developed and developing countries in terms of physical, social, cultural and psychological environments. India is the amalgamation of different cultures, geography, economical status, changing values, gender discrimination, and rapid change where as European and Western continents have gender equality, modernity, comfortable life styles and discipline. Since last century, a lot of internal pressures have affected the quality of life, wellbeing and mental health of Indian citizens who have moved out of the country. The aim of present study was to analyze the quality of

life across the span of development of an Indian individual in the dual-continental perspective. The methodology involved the analysis of a longitudinal case study of an Indian female (aged 56 years) who was a resident of London for the past 30 years after migrating from India at the age of 25 as a single female, who lead a positive and high quality life. The case study focuses on the psychological phenomenology of an Indian female and the factors which contributed to positive living were analyzed. The results show that a positive attitude, social and economical security, self regulation, locus of control, job satisfaction, disciplined life style, and happiness contributed to positive living. The analyses of case study show that according to the dual continental perspective, the physical quality of life is high in the European continent but psychological wellbeing is high in the native continent. In conclusion, this case can be applied to dual citizenship so that positive life and living can be enhanced.

Keywords: quality of life, development, positive psychology, dual continental perspective, India

Life skills for quality of life at old age : Need for community well-being

SINGH, A. P. (Govt. M.L. B. Girls P.PG. College Bhopal M.P.)

Ageing is virtually a universal phenomenon. The world community seems to have become increasingly aware of the multifarious issues that surround old age. This concern is attributed to the increasing number of older people in the population and its consequential demands for health, mental health, and care. Quality of life is a holistic concept. Quality of life is defined by WHO as an individual's perception of his/her position in life in the context of culture and values system and in relation to their goals, expectations, standards, and concerns (WHO QOL group, 1995). UNICEF defines "life skill" as the psychosocial and interpersonal competencies in a person that enable him/her to deal effectively with the demands and challenges of everyday life. The impotence of a 'healthy community' has been recognized as an emergent field of research to understand the linkages between human survival, the ecosystem and wellbeing. The

concept of wellbeing has been defined as the state of being healthy, happy or prosperous. Community wellbeing is an emerging concept that needs exploration through empirical research to understand the indicators of wellbeing, empathy, understanding, security, and psychosocial conformity by living together in a social community. The present study focuses on exploring life skills which enhance quality of life among older people who are living in a small community and to see whether this leads to community wellbeing and a positive life. The sample consisted of 50 male and female participants (aged 70 to 80 years) who were randomly selected from Aasara old age home (multicultural) in Bhopal M.P. India. A life skill questionnaire was developed and administered to find out the correlation between life skills and quality of life. The two way interaction between gender and age reflected a significant difference in the type of life skills and quality of life. It was found that positive life skills enhance quality of life and quality of life contributes to community wellbeing.

Keywords: quality of life, community wellbeing, life skills, age, older people

Cancer patients' perceptions about their quality of life: a qualitative exploration

MEHROTRA, A (Indian Institute of Technology Kanpur, Kanpur,U.P.)

Research on the psychosocial aspects of cancer patients has concentrated on their quality of life. The present work attempts to understand aspects of patients' quality of life through their stories. The main idea behind this work was to understand how patients' stories reflect their lives and to gain an understanding of the changing patterns, whether they are personal, professional, physical, psychological, emotional or financial. Narratives were collected from cancer patients. Narrative analysis was done to extract themes related to patients' perceptions of their life and their relation with their quality of life. It was found that patients' perceptions of their disease severity affected their life experiences. Patients' quality of life was also influenced by the effects of cancer treatment. At the personal level, patients' quality of life gets affected through their physical

appearance, will-power, mood, preferences and thoughts. At a broader level, the quality of patients' relationship with their family members is also affected. In people affected by cancer, social, emotional, instrumental and psychological support enhances their well-being and quality of life. Another reason for the impact of disease on patients' experiences is rooted in financial matters. In India, most people are not insured for their health which puts them under major stress. Religious and spiritual thoughts were prevalent in all the narratives. During their illness, patients tended to rely more on religious beliefs and fate. Patients applied religious beliefs to make their thoughts more positive in order to reduce the negative impact of illness on their well-being. It was also observed that patients were willing to share their experiences. Sharing could be one medium to make a person's psychological and emotional quality of life better. Disease not only affects patients' present life, it also affects their future perspective. This was also reflected in their narratives. Patients also expressed their views regarding the role of information and their communication pattern with medical experts in order to reduce their stress levels and thereby enhancing their overall quality of life. The results have important implications for counselling cancer patients about their psychosocial issues and concerns.

Keywords: cancer, quality of life, narrative analysis, religious beliefs, stress

The quality of life and depression among working and non-working women

SHRIVASTAVA, M. (Govt. M.L.B.Girls P.G. College Bhopal, M.P)

Quality of life is the product of the interplay between social, health, economic and environmental conditions which affects human and social development (Ontario Social Development Council, 1997). In India, quality of life is the most neglected aspect at the social as well as government level. Unfortunately, in India, attention has been given only to the physical health of women and children in terms of mortality and morbidity and less attention given to mental health and quality of life. Due to changes in the psychosocial and economical

environment in India, women have started seeking employment. However, this is leading to deterioration in the areas of physical health and mental health. Depression is the most unrecognized illness among children and women in urban India especially among house wives (Singh, 2007). The present study aims to explore the correlation between quality of life and depression among working and non-working women in the sub-metro region of India. The sample consisted of 70 women (35 working and 35 non-working) aged between 35 and 40 years. Participants were randomly selected from Bhopal and were from an average economical background. The Zung depression rating scale was selected to assess depression. The quality of life questionnaire was developed to study the correlation between depression and quality of life among women. The Zung depression rating scale was administered on 70 working and nonworking women. The quality of life questionnaire was used to assess the level of QOL. The correlation was analyzed and a significant difference was found between the quality of life and depression among working and non-working women of average economic status in India. The quality of life of working women was found to be better than the non-working women. The economical condition and mental health of working women was also found to be better when compared to non-working women. The level of depression was low in working women compared to non-working women but work stress was found in some working women.

Keywords: quality of life, depression, India, women, employment

Racism, power and reconciliation: Listening to indigenous voices

Chair(s): BRETHERTON, D. (Australian Centre for Peace and Conflict Studies)

This symposium consists of five papers which explore processes of reconciliation. The first paper reviews research into the current state of the relationships between Indigenous and non-Indigenous Australians and provides a background to understanding the need to repair and heal relationships. The second paper describes similar studies in Chile and uses a narrative approach to understand how Mapuche people cope with racism and discrimination. The third paper gives a conceptual overview of reconciliation processes, and analyzes the importance of structural factors and power inequalities. The fourth paper then brings our attention back to Australia and explores indigenous views of the impact of the Prime Minister's apology. The final presentation is by an Indigenous person, who will describe her work in conflict resolution and peace building in remote Aboriginal communities in the Northern Territory of Australia and examine how current government policy impacts on her work. The key objectives of this symposium are to listen to Indigenous voices and to contextualize reconciliation processes in Australia and other parts of the world. The symposium will raise some reflective questions about the political role of psychologists and psychological research. Are psychologists removed from political events? Or are we located within the dynamics of power? An important feature of this symposium is the exploration of methods of psychological research which are sensitive to the power dynamics inherent in research and create spaces in which indigenous and minority voices can be heard.

Relationships between Indigenous and non-Indigenous Australians

MELLOR, D. (Deakin University)

To provide a background into the current state of the relationship between indigenous and non-indigenous Australians. This paper discusses four phases in the construction of the Australian nation as it is today, in terms of the Indigenous experience: invasion and dispossession, forced assimilation, striving for self-determination, and the expectation of reconciliation. The need to resolve the current impasse is exemplified by data drawn from our studies on racism as it is experienced by Indigenous Australians, and a discussion of how it impacts on the lives of this population. It is concluded that further work needs to be done at a political level to improve the lived experiences of Indigenous Australians and to repair the relationship between Indigenous and non-Indigenous people. The possible role of psychological theory and psychologists in this endeavor will be discussed.

Keywords: *indigenous Australians, racism, dispossession, forced assimilation, reconciliation*

Cultural factors that enhance self-esteem and ethnic reaffirmation among Mapuches in Chile

MERINO, M. E. (Universidad Catolica de Temuco)

The aim of this paper is report on the findings of a study conducted with Mapuche adults from Temuco and Santiago in Chile, with a particular focus on the effectiveness of some cultural strategies utilized by Mapuches to cope with discrimination and to enhance self esteem and ethnic reaffirmation. In this qualitative study 100 Mapuches from Temuco (50) and Santiago (50) with ages ranging between 23 and 78 years ($M = 47.2$, $SD = 14.1$) and representative of low, lower middle and middle socioeconomic status were interviewed. The method used was discourse analysis through life story oral narrations. The analyses found that experiences of discrimination may generate positive and negative psychosocial long-term effects. Among the positive effects is the development of self-esteem and ethnic affirmation acquired through a family and community strategy of teaching children and adolescents to face discrimination positively. This effect was reported by half of the sample and participants identified the latter period of adolescence to

be the key developmental stage for such positive outcomes to be triggered. However negative long-term psychosocial effects such as negation of ethnic identity and acceptance of inferiority were also reported by around one quarter of participants. This study has shown that a substantial proportion of Mapuches in Chile exhibit resilience to discriminatory stressors due to the use of coping strategies that, on the one hand protect them against the negative effects of discrimination, and on the other, trigger an increase of self-esteem and ethnic reaffirmation.

Keywords: *discrimination, self-esteem, ethnic reaffirmation, adolescence, coping strategies*

Power and reconciliation

TINT, B. (Portland University)

This paper will explore the theoretical implications of power relationships within the reconciliation process. The paper is conceptual but will use case study material to illustrate theoretical points. Many societies worldwide have suffered long term conflicts that have divided nations, groups and communities of people. Most conflicts today are not interstate conflicts between sovereign nations, but between communities that often live together in co-existence. This includes Jewish Israelis and Palestinians, Hutus and Tutsis in Rwanda, Tamil and Sinhalese in Sri Lanka, Blacks and Whites in South Africa and Native communities and White U.S. Americans, Canadians and Australians. In many of these contexts there have been processes of reconciliation that have attempted to address the wounds of the past while simultaneously forging a better future. As scholars and practitioners in peace and conflict resolution, we must be mindful of ways in which attempts at reconciliation can re-stimulate injuries of the past, particularly those that are rooted in hegemony and abuses of relational, structural, political and economic power. This paper will explore the theoretical implications of power relationships within the reconciliation process. The paper will reflect on a number of questions. In whose best interest is it to "reconcile" - if, when and how? What are appropriate processes that include both a reconciliation focus but also address the power differentials that exist not only in the past, but

in the present as well? What are the challenges and responsibilities of those on differing sides of the power relationship? This paper will be grounded in both theoretical constructs surrounding these issues as well as anecdotal case studies informing these questions.

Keywords: *power relationships, reconciliation, conflict resolution*

Themes in Australian reconciliation: What comes after sorry?

BALVIN, N. (University of Queensland)

The aim of this study was to examine Aboriginal Australians' experiences and perspectives on the Parliamentary apology to the Stolen Generations (February 2008) and their ideas regarding the next steps in Indigenous and non-Indigenous reconciliation, while also adding to the theoretical body of knowledge regarding apologies and reconciliation. In particular, the research aimed to understand the impact of the apology on Indigenous Australians and whether their perceptions of the relationship with non-Indigenous Australians have changed since the apology. 34 (19 females and 15 males) Aboriginal Australians from urban (Melbourne, Adelaide, Brisbane) and rural/remote (Ipswich, Broome, Darwin and Yirrkala) parts of Australia participated in semi-structured interviews examining the apology, forgiveness, and the next steps needed for reconciliation. The interviews were approximately 30-60 minutes long and used an elicitive interview style, which allowed for the introduction of new themes. Participants were recruited either by direct approach by the interviewer or via a "snowball" sampling method, where another Indigenous Australian passed the researchers' contact details to potential participants. Participants were reimbursed for their time. The interview data was analysed using the qualitative software package NVivo. Preliminary findings were shared with Indigenous Australians and their feedback shaped the final results. The views of Indigenous Australians on the apology varied. Some believed it provided empty words without actions, while others thought it was a unifying experience that acknowledged Indigenous Australians and their history. Daily

experiences of post-apology life were categorised into themes of understanding, accessibility and appropriateness of services, prejudice and stereotyping, and powerlessness. Ideas for the next steps in Reconciliation were seen as the responsibility of the following groups: the government, non-Indigenous Australians, and Indigenous Australians. Even in a small sample of Indigenous Australians, a myriad of views on each theme was present, highlighting the importance to not view them as a homogenous group. In line with pre-apology research (Mellor, Bretherton & Firth, 2007) many agreed that the apology was an important symbolic step in Reconciliation, but it must be accompanied by practical undertakings. The daily experiences of Indigenous Australians were similar to those found in pre-apology research (Mellor, 2003) and the responsibility for pursuing Reconciliation was seen as multi-faceted, ranging from systemic changes by the government to interpersonal relations between Australia's Indigenous and non-Indigenous people.

Keywords: Australian Aboriginal, Parliamentary apology, reconciliation, forgiveness, prejudice

Dispute resolution, restorative justice and cultural relevance

BISHOP, H. (Department of Justice)

The aim of the current study was to provide a space for Indigenous voices and examine the impact of policy on practice. This paper will discuss the work the author has been doing in a remote Aboriginal community in the Northern Territory as the Cross Cultural Mediator for the North Australian Aboriginal Justice Agency. The role of this position is to foster and broaden conflict resolution capacity without diminishing pre-existing conflict management strategies (that the practitioners themselves referred to as interventions) and respecting the cultural needs and priorities of the community. It was necessary for the author to learn first from the people themselves in order to know how to be able to start on their's and subsequently her journey together. The work required attention to detail, that so that the important features and vital elements of culture were not missed. As the author

comes from another Indigenous background she needed to learn patience so that she could build a firm appreciation of their cultural imperatives and thus appreciate more deeply their dispute resolution systems and politics. This way of working was difficult against the underlying backdrop of the Northern Territory Emergency Response Act 2007, (Government intervention) under which the Aboriginal people being worked with are controlled. The paper will explore the necessary elements, behaviours and communication necessary for mutual liberation while the NTER continued to undermine the work and oppress and control the people being worked with. While on the one hand government policy in Australia is to further reconciliation between Aboriginal and non Aboriginal people the policy of intervention in the Northern Territory undermines this goal.

Keywords: Aboriginal community, Australia, conflict management, cultural needs, reconciliation

Readiness for offender rehabilitation

Chair(s): DAY, A. (Deakin University)

Much of the future understanding about offender rehabilitation is likely to come from moving beyond recidivism outcome studies towards a better understanding of the processes by which offenders can be successfully rehabilitated. An understanding of treatment readiness can help to explain treatment success and failure. In this invited symposium we discuss how treatment readiness is likely to be an important determinant of programme engagement and completion, offer a framework from which to understand and assess readiness, and describe interventions that might be used to modify or address low levels of readiness at an individual and systemic level.

What is treatment readiness?

DAY, A. (Deakin University)

This paper introduces the construct of treatment readiness and how it might inform the development of offender rehabilitation programs. Psychological and environmental determinants of treatment readiness are discussed in relation to the need to match the needs of the individual with those of the context in which offender programs are offered.

Keywords: *treatment readiness, offender rehabilitation programs*

Assessing treatment readiness: A case study

VESS, J. (Deakin University)

The purpose of this paper is to illustrate the concepts of treatment readiness using a detailed case description of a sex offender with limited success in previous treatment

experiences. Various factors are considered that influence treatment readiness, both generally and specific to sex offenders, beginning with the assessment process and continuing through treatment planning, treatment delivery, and ongoing risk management. The sequence of the paper starts with a review of the case history, current criminal justice and clinical context, assessment findings, case formulation and treatment recommendations. This is followed by an assessment of treatment readiness in this case, resulting in an expanded case formulation and treatment recommendations, including recommendations for the facilitation of treatment readiness.

Keywords: *treatment readiness, sex offender, case formulation, assessment, treatment planning*

The psychometric assessment of treatment readiness

CASEY, S. (University of South Australia)

Despite first being articulated in an offender context more than a decade ago, there have been few attempts to clearly operationalise the readiness construct and develop appropriate measurement tools. A lack of clarity regarding definition and measurement poses a dilemma for practitioners. On the one hand, there is an expectation of evidence-based practice which necessitates a clear understanding of what works when, where, and for whom, while on the other, little is available in terms of psychometrically sound assessment tools to measure treatment readiness. This paper presents an overview of evidence-based assessment, with a particular focus on the assessment of readiness for both case conceptualisation and treatment planning, and treatment monitoring and evaluation.

Keywords: *treatment readiness, assessment tools, evidence-based assessment, treatment planning, treatment monitoring*

Finding the “will and the way” in offender rehabilitation: Maintaining treatment readiness in a compulsory drug treatment prison

BIRGDEN, A. (Compulsory Drug Treatment
Corrections Centre, Corrective Services NSW)

In August 2006 a drug treatment prison (the CDTCC) was established under the Compulsory Drug Treatment Correctional Centre Act 2004 in Sydney. This legislation is unique in Australia. A program of compulsory drug treatment and rehabilitation for repeat drug-related male offenders aims to: (1) provide ongoing judicial supervision from the NSW Drug Court, (2) treat drug dependence, (3) prevent and reduce re-offending and (4) promote community reintegration. The CDTCC service delivery model is theory based and provides a set of principles to ensure the humane and ethical assessment, treatment, and management of offenders. While the law is compulsory, the procedures and roles of staff within the Program have been established to develop a therapeutic alliance and engage offenders in change. Treatment readiness and maintenance is considered central to effective service delivery. Educational, psycho-educational and therapeutic programs are carefully sequenced. Case management strategies ensure natural justice processes, apply motivational interactions, deliver contingency contracting and support autonomous decision-making. Measures of treatment readiness are applied and re-applied at regular intervals. The outcomes of the assessments, and anecdotal information regarding offender perceptions of the program, will be presented. It will be argued that the active focus on participant motivation and capacity overcomes the compulsory nature of the program.

Keywords: drug treatment prison, compulsory drug treatment, offenders, treatment readiness, Case management

Recent Australian studies on perfectionism using the Frost et al. Multi-dimensional Perfectionism Scale

Chair(s): HICKS, R. (Bond University)

Discussant(s): HICKS, R. (Bond University)

These studies reflect papers chosen for presentation from a series of some fifteen student research projects completed since 2005 in an Australian private university, on the correlates of perfectionism as assessed using the Frost et al. Multidimensional Perfectionism Scale (MPS). There will be a brief overview presentation on the findings of the studies and five papers selected to represent specific emphases. One paper will examine the clinical applications of perfectionism in relation to brooding and reflective pondering; two will examine the use of the MPS in health and body-image studies involving the media; a fourth paper will examine stress among university students in relation to perfectionism, coping strategies and personal values; and the fifth paper will examine the psychometrics including confirmatory factor analyses of the MPS across the Australian studies. Time for questions is made available throughout, including open discussion in the brief final wrap-up session. The key learning objectives include: (1) to demonstrate that perfectionism continues to be an area of substantial interest in academia and in clinical and health psychology practice and that new research findings continue to inform researchers and professionals; (2) to show that perfectionism and depression are related (confirming known data), but that a specific component of rumination, reflective pondering, is responsible for mediating the relationship; (3) to highlight that media influences how we feel about our body shape, and that the influence is consistent with both cultivation (exposure) theory and objectification (self-internalisation) theory but also with one's own perfectionist attitudes; (4) to demonstrate that the personality factors of perfectionism and

neuroticism in particular mediate the relationship between media influences and body dissatisfaction; and (5) to understand the similarities and differences in the US and Australian responses to the items and scales of the Frost et al. MPS, supporting its use; following internal consistency and confirmatory factor analyses of the Australian data.

Comparing brooding and reflective pondering as mediators between perfectionism and depression using the Frost MPS, the Lovibond DASS and the Hoeksema Response Style Questionnaire

MCHUGH, M. (Bond University)

Harris, Pepper, and Maack (2007) identified rumination as a mediator between maladaptive perfectionism and depression, but did not examine whether the two components of rumination, brooding and reflective pondering, acted similarly or that one was more prominent than the other. This project examined the proposition that brooding and reflective pondering contributed equally as mediators between maladaptive perfectionism and depression in a sample of 213 Australian University students. The 213 students completed self-reports for the Frost Multidimensional Perfectionism Scale (Frost et al., 1990) measuring (maladaptive) perfectionism, the Response Style Questionnaire (Nolen-Hoeksema & Morrow, 1991) measuring rumination and its subscales, and the DASS (Depression, Anxiety & Stress Scales, Lovibond & Lovibond, 1995). The current study found that rumination (combination of reflective pondering and brooding) mediated the relationship between perfectionism and depression; and that reflective pondering alone, but not brooding alone, mediated the relationship between perfectionism and depression. These results supported the Harris et al. paper but further suggested that reflective pondering is the main cognitive mechanism contributing to depression, especially among respondents scoring higher on the maladaptive perfectionism scales. Reflective pondering and the thought processes associated with maladaptive perfectionism (doubting of actions, concern over mistakes, recollections of

parental criticism and expectations) are clearly associated and overlap significantly. In a clinical setting attention should be focused on the cognitive thought processes with steps to alleviate the problems associated with perfectionism and reflective pondering.

Keywords: depression, perfectionism, brooding, reflection, university students

Perfectionism and media as correlates of body image satisfaction. Do cultivation and self-objectification theories help explain body image satisfaction?

MURRAY, D. (Bond University)

Food purchasing habits, exercise regimes, and dietary actions often stem from dissatisfaction with one's body image. But where does the dissatisfaction originate and what is the relation to perfectionism? The origins may be in media exposure and correlates may be perfectionist attitudes and peer/self pressures. It is argued by some that the greater the amount of television exposure the more likely the participants, especially female, are to see TV as 'real life' and to endorse and internalize the images portrayed. On the other hand it is argued by others that individuals (mostly females) internalize a third-party view (others' views) of their body image (Objectification theory). This study examined the correlates of body image dissatisfaction and also whether the two theories were supported. Self-report questionnaires were completed by 265 Australian university students. To demonstrate the relationships with cultivation theory, this research included as variables amount of TV exposure and magazine reading to identify influences on body image. To demonstrate the links with objectification theory, the Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ) was used to assess the degree of internalization of media messages. Other scales used included Body Image Satisfaction (Body Shape), and a demographics questionnaire containing items on age, gender, overall body satisfaction (item), and media influences (time spent reading or watching; and the specific content involved). Correlation findings showed that there were strong relationships between body image and perfectionism; between overall body

satisfaction and specific body image attitudes; and between body image and socio-cultural influences (especially peer pressures, information, and internalization). Regression analyses predicted body image from independent variables of perfectionism, TV exposure and socio-cultural influences. When the relationships were considered against cultivation and objectification theories, the evidence showed that both theories were supported: amount of exposure (cultivation) and degree of internalization (objectification) both contributed to body image. The results showed perfectionism was associated with body image dissatisfaction; and that perfectionism along with TV exposure and the socio-cultural variables (including internalization) predicted body image responses. Implications of the findings are discussed in relation to the two theories.

Keywords: *perfectionism, body satisfaction, self-objectification theories, peer pressures, internalization*

Maladaptive perfectionism and neuroticism as mediators between sociocultural influences and body image dissatisfaction.

PEDERSEN, L. (Bond University)

Recent figures from the Australian Bureau of Statistics show Australians are now on average among the fattest in the world. Yet emphases in the media highlight thinness as the ideal. As a result we have much effort spent by many to 'meet the ideal'. Diets and exercise regimes abound in the aim to 'lose weight' and 'look trim'. But we still do not understand what the correlates are of the body dissatisfaction that drives many. One question raised in our research asked whether certain personality traits such as perfectionism and neuroticism place some individuals at a higher risk for body image/ body shape dissatisfaction. This study examined the relationships among maladaptive perfectionism, neuroticism, sociocultural influences and body image dissatisfaction, using a non-clinical sample. Self-report measures were completed by 265 university students and community members aged 18-40 years. Instruments completed included the Frost et al. Multidimensional

Perfectionism Scale (MPS); the IPIP scales assessing the Big Five personality factors; the Body Shape Questionnaire measuring body preoccupations and concerns characteristic of bulimia and anorexia, and the Sociocultural Attitudes Towards Appearance Questionnaire-3 measuring three variables relating to sociocultural influences (thin ideal internalisation, pressures, and information). The findings showed that maladaptive perfectionism and neuroticism (negative and faulty thinking) fully mediated the relationship between media as an information source regarding beauty/thinness and the resulting body image dissatisfaction. These personality attributes should be taken into account by counselors in clinical applications which need to address the thinking processes involved, to improve treatment outcomes, and by the media in relation to how messages are delivered and may be picked up by vulnerable individuals.

Keywords: *perfectionism, neuroticism, sociocultural influences, body dissatisfaction, media*

Perfectionism, coping strategies, values, and stress in a student population

CVET-CVETANOVIC, L. (Bond University)

Identifying predictors of stress in students' lives is instrumental in assisting to alleviate their stress. The aim of this study was to examine the relationships between perfectionist tendencies, coping strategies, personal values and stress in a student population. The Frost Multidimensional Perfectionism Scale (FMPS), the Brief COPE, the Depression Anxiety and Stress Scale (DASS), and a Survey of Personal Values (including the values of achievement, goal-orientation, variety and decisiveness) were completed by 192 students, who were aged between 18 and 62 years ($M= 25.5$). Results revealed that highly maladaptive perfectionists experience more stress than do adaptive perfectionists, though both suffer from stress outcomes. Closer examination revealed that Negative coping strategies and both adaptive perfectionism and maladaptive perfectionism contributed to stress. While personal values did not correlate with stress, the valuing or

undervaluing of achievement was found to be correlated with perfectionist tendencies. An implication of these findings for counseling and remedial educational programs is that stressed students with maladaptive perfectionist tendencies in particular would be likely to benefit from learning more effective coping strategies-- avoiding the use of negative coping strategies and learning ways to cope positively with stress. Programs could also consider the role values play for perfectionists and highlight how to develop and maintain personal values of achievement. This study has contributed to the perfectionism literature by demonstrating the links between perfectionism and negative coping strategies and between perfectionism and achievement as a personal value.

Keywords: stress, perfectionism, coping strategies, personal values, students

Inter-correlation and confirmatory factor analysis data on the Frost et al. Multidimensional Perfectionism Scale over more than 750 Australian respondents

HICKS, R. (Bond University)

The Frost et al. MPS has been used extensively in many different countries around the world including Australia, but internal psychometric and validation data on how the MPS operates within the Australian context is not readily available. This study aims to address this gap. As part of a series of studies several groups of participants comprising some 750 Australian university students, employees and the unemployed completed the Frost et al. MPS, along with a variety of other scales. The data on the MPS were extracted for purposes of this paper, and the scales inter-correlated (the six scales are: Concern over mistakes, doubting of actions, parental criticism, parental expectations, personal standards, and organization). These were compared with the data available in the Manual. In addition internal consistency analyses of the items and scales, and confirmatory factor analyses, were conducted to examine how well the MPS model was reflected in the Australian data. Current limited findings are generally supportive of the inter-correlation matrix, reflecting similarity of operation across

cultures; in addition the item-scale homogeneity relationships are also supportive. The confirmatory factor analyses are to be completed and the results presented in due course. Given the importance of perfectionism in links with clinical and health areas, and in relation to socio-cultural influences (from media), specific data is needed on how well constructed psychometrically the MPS is, and how it operates in the Australian culture. This paper supplies some of this information, and indicates the confidence academics and practitioners can have in the questionnaire. Perfectionism continues to be a source of concern for many in their daily lives, and perfectionist attitudes are easily transferred to the next generation. It is hoped this data on the MPS provides further support in the battle to improve personal and family life-styles, through the supportive and cautionary evidence presented.

Keywords: Multidimensional Perfectionism Scale, perfectionism, culture, confirmatory factor analysis

Recommendations to the U.S. National Biodefense Science Board for disaster mental health and psychological support

Chair(s): DODGEN, D. (Office of the Assistant Secretary of Health and Human Services for Preparedness and Response)

Discussant(s): REVEL, J. P. (International Committee of the Red Cross)

The Disaster Mental Health Subcommittee of the U.S. National Biodefense Science Board provided the foundation for the development of the Board's report and recommendations regarding provision of psychological support in the aftermath of a disaster. The subcommittee consisted of 12 "invited experts" in disaster mental health and cabinet-level federal appointees to represent the perspective of various government entities. The subcommittee engaged in an intense process of examining the international literature and exploring strategies across five months. The final report is wide-ranging, and includes fairly dramatic recommended changes in the ways that psychological support is provided and includes strategies that could change the United States society's perceptions and understandings of psychological support. These recommendations fall into four broad categories: Intervention and operational strategies, communications and messaging, education and training, and issues that cut across all three categories. These recommendations may prove useful for countries developing strategies for psychological support. The chair and each of the presenters were integrally involved in developing the recommendations on the topics they will describe. The discussant was integrally involved in developing international humanitarian psychological support for a major Non-Governmental Organization (NGO), and later was central to revising and improving the psychological program for another major NGO. For a quarter century he has been assisting developing and developed countries with health

and psychological programs. The learning objectives of the symposium are to help participants to understand recommendations for: (1) integrating psychological support into the Concept of Operations for government and civilian response agencies, (2) ensuring there is an appropriate research agenda on psychological support in public health emergencies and disasters, (3) improved assessment of psychological needs in public health emergencies and disasters, (4) improving the training of professionals and the public in disaster mental health and psychological first aid (5) a strategy for effective disaster and mental behavioral health communications, (6) ensuring that the needs of at-risk and culturally diverse individuals are effectively served, and (7) the usefulness of these recommendations for developing and developed countries.

Integrating mental and behavioral health into all levels of disaster preparedness and response

REISSMAN, D. (National Institute of Occupational Safety and Health)

In the United States, there is a need for an overarching framework to coordinate response efforts aimed at the behavioral and mental health needs of disaster-affected populations. Such a framework must be able to address diverse and dynamic scenarios. The intervention recommendations in this report are designed to address a broad span of public health and social concerns, including coordination, service provision, and health surveillance. Reactions to public health directives are also important to assess, such as required vaccination, evacuation or sheltering in place, or hand-washing to avoid the spread of infection. A shared (common) operational picture informed by monitoring population health and the recovery environment can better target mutual aid, risk communication, and the distribution of limited resources. In addition, this should be integrated with screening and triage to ensure that specific needs are addressed in a timely and appropriate manner. Information required includes assessing current beliefs about intervention strategies, trusted information sources, unmet health and social service

needs, utility of outreach and education efforts, and other recovery-related activities. From an incident management standpoint, leaders are also vulnerable to the trauma of the disaster situation and may benefit from expert counsel to remain appropriately focused and mentally flexible under duress. It can be quite challenging to make sense of complex health information during disasters. Interventions should be based on empirically defensible and evidence-based practices. Empirically, elements that help establish a sense of safety, calm, self- and communal efficacy, hope, and social connectedness do aid adaptation and coping. It is important to match actual need with the implementation strategy - that is, who delivers the intervention, when it is delivered, and how the intervention unfolds. The design and implementation of an intervention must fit the ecology of the culture, place, and type of trauma at a systems level. To accomplish this, research is needed to develop and test the efficacy of interventions that promote resiliency and prevent or mitigate disaster-related disorders. Response and recovery organizations should incorporate the most recent research findings, including near real-time intervention evaluation efforts, into planning and operations.

Keywords: *natural disasters, health, incident management, Social factors*

Recommendations for education and training in disaster mental and behavioral health

JACOBS, G. (Disaster Mental Health Institute)

Recommendations regarding education and training focused on two areas: disaster mental health theory/practice, and community-based psychological first aid. Psychological first aid, as used by the committee, refers to psychological support that is both used to improve one's own resilience and is provided by non-mental health professionals to family, friends, neighbors, co-workers, and students. It focuses on education regarding traumatic stress and on active listening. The term also incorporates more sophisticated psychological support given by primary care providers to their patients. Properly executed, psychological first aid is adapted to the needs of each group

or community (i.e., group of people with shared interests) implementing it, ensuring that the psychological first aid that is introduced in the community does not conflict with the world view of the group. It also builds on the strengths of the community in which it is being implemented. The recommendations also focused on two groups, professionals and the general public. The mental health professions are encouraged to incorporate disaster mental health as an integral part of their curricula. In addition, health care professionals (e.g., medicine, pediatrics, nursing, and epidemiology), the full range of emergency responders (e.g., law enforcement, fire service, emergency medical responders), coroners and morgue staff, disaster relief personnel, faith-based professionals and leaders, disaster response leaders (e.g., incident commanders, emergency managers, and civil service and elected government leaders), and educators would be encouraged to train their professions both in disaster mental health theory, and in advanced forms of psychological first aid, customized for each profession. It was also recommended that the general public be trained in psychological first aid. The success of psychological first aid as a strategy depends on the penetration of the training in the affected population. If a significant portion of the population is trained in psychological first aid, then, in the event of a public health emergency or disaster, there will always be someone nearby to provide psychological support. A populace educated in psychological first aid will help ensure that the limited available time of disaster mental health professionals is reserved for those who are most in need.

Keywords: *disaster mental health, psychological first aid, primary care providers, emergency responders, community*

Disaster mental and behavioral health recommendations for communications and messaging

BROWN, L. (Louis de la Parte Florida Mental Health Institute)

The aim of this presentation is to help participants understand that communication and messaging plays a central role in

influencing individual and collective behavior, feelings, and thoughts and is an essential mental and behavioral health intervention in disaster preparedness/response. During a disaster, accurate, timely, and credible information distributed through a variety of sources and media is a key determinant of human impact, operational effectiveness, and social and economic consequences. Information during a crisis can promote life-saving and altruistic behaviors and discourage actions that hinder an effective response. Disaster mental and behavioral health specialists with expertise in crisis and risk communication can maximize effectiveness in communicating with the public during and after crises. Explaining complex scientific concepts in plain language and graphics is difficult, and the opportunity for misunderstanding is high. In contrast to the risks posed by flood waters or falling debris, where there are familiar cues, communicating risks of invisible and novel agents such as radiation and bacteria is a far greater challenge. The preparation and testing of messages before an event can maximize the potential that instructions given during an event will be comprehended. Recognition of the need for cultural competence in dealing with groups that are different from one's own is also critical. Communication and mental and behavioral health education, training, and intervention are linked and represent areas that can bolster community resilience. The communications recommendations highlight the ways in which disaster preparedness can be enhanced by the incorporation of mental and behavioral health principles into communication. A valuable disaster mental and behavioral health communication strategy includes: (1) Mass communication messages that deliver psychoeducation, information on sources of help, and other mental and behavioral health topics related to specific hazards/threats and disaster phases, (2) Education and training regarding the integration of mental and behavioral health/social science principles and emergency risk communication (3) A process to identify, educate, and train a cadre of mental and behavioral health experts to serve as consultants, interviewees for resources for the media, and (4) Establishes and enforces policy,

with respect to disaster and emergency health issues.

Keywords: *disaster preparedness, crisis, altruism, cultural competence, communication strategy*

Disaster mental and behavioral health recommendations regarding vulnerable and at-risk populations

BOYD, E. (Disaster Mental Health Institute)

The Disaster Mental Health Subcommittee of the NBSB recommended that responsiveness to culture and diversity must be supported in principle and in practical fact in any disaster behavioral health plan. Issues of culture and diversity should be carefully vetted and implemented into all plans, programs, curricula, and efforts related to disaster preparedness, response, and behavioral health. Vulnerable, at risk populations should be addressed in all facets of disaster planning, preparedness, recovery, and research, including disaster mental and behavioral health efforts. Vulnerable populations are those who may require additional assistance before, during, or after an emergency. Functional areas include maintaining independence, communication, transportation, supervision and medical care. These populations may include children, older adults, people from diverse cultures and religions, individuals with limited language proficiency, individuals with disabilities, and those with limited ability to transport themselves to access services. This presentation will focus on issues that must be addressed in order to be truly culturally-responsive in the provision of psychological support to meet the needs of vulnerable and at-risk populations for communities which have experienced disaster.

Keywords: *disaster mental health, culture, diversity, disaster preparedness, community*

Re-envisioning the clinical psychology curriculum in Australia

Chair(s): PACHANA, N. A. (University of Queensland)

Discussant(s): KNIGHT, B. (USC Davis School of Gerontology), MERRICK, P. (Massey University)

This symposium will focus on outcomes from a national Australian Learning and Teaching Council supported project examining empirically supported, internationally-benchmarked and public health and policy-responsive innovations to the existing postgraduate clinical psychology curriculum in Australia. The latest research in each of the areas of competency assessment, supervision strategies, regional and rural issues, training and service delivery models and fitness to practice policy strategies will be reviewed. A range of practical examples of teaching, supervision and practice strategies are presented. The key learning objectives are: (1) To outline the rationale behind, and strategies to implement, competency-based assessment within training programs (2) To present an overview of effective supervision strategies in clinical training and outline their effect on student and client outcomes (3) To outline the many issues facing regional universities concerning recruitment of students as well as placement and supervision issues, presenting data from a recent student survey on the issues (4) To outline the evidence for, and give working examples of, e-therapy strategies that are in use, offering suggestions as to their incorporation into a clinical training program (5) To outline the likely benefits and costs of a Problem Based Learning teaching model in clinical psychology training (6) To present the rationale for, obstacles to, and benefits which may flow from a Fitness to Practice policy embedded within clinical postgraduate training programs (7) International discussants place the above within an international context.

Competency-based assessment in clinical psychology: Rationale and strategies

PACHANA, N. A. (University of Queensland),
SOFRONOFF, K. (The University of Queensland)

Internationally the standard of training in clinical psychology at the postgraduate level has moved from a model wherein hours of study equated skill, towards one in which competencies must be demonstrated via evidence at both the student as well as the program level. This shift in training emphasis is outlined and implications for the Australian postgraduate training environment are presented. Examples of practical means of benchmarking and assessing competencies in an international as well as Australian context are offered. Our review of the extant literature reveals a small but growing empirical as well as theoretical literature attempting to describe models and examples of competency-based models of clinical training (e.g. the cube model of core competencies of Rodolfa et al., 2005). Our review dovetails with results from a survey of first-year postgraduate clinical psychology students undertaken in Semester 2, 2009 nationwide. This data is presented alongside data from a long-standing and award-winning competency-based assessment strategy developed at the University of Queensland. Students overwhelmingly indicated that demonstrations of their developing clinical skills were most highly valued in their training; unfortunately such evaluations were utilized infrequently compared to traditional assessment techniques. Discussion of implementation of, as well as practical examples from the UQ competency-based assessment protocol, are offered. Clinical training programs in Australia are influenced by many drivers: Commonwealth policy, University and registration board regulations; student numbers and demands, and placement availability and access to supervisors. The demonstration of competence in provision of clinical services is poorly articulated and infrequently incorporated into clinical training programs in psychology at the postgraduate level. Existing models of competency benchmarks and toolkits are available (e.g. Kaslow et al., 2009) and deserve broader consideration within the Australian context.

Keywords: *competency-based assessment, clinical psychology training*

Toward effective supervision in clinical psychology training

O'DONOVAN, A. (Griffith University; The University of Queensland), HALFORD, K. (Griffith University; The University of Queensland)

There is a strong professional consensus that clinical supervision is a critical element of training in clinical psychology. However, there are significant limitations in the evidence of its effectiveness in promoting supervisee competence or positive client outcomes. This study reviews what aspects of clinical supervision influence supervisee and client outcomes, and assesses the extent to which such characteristics are represented in clinical psychology training in Australia. An extensive literature search identified 56 empirical papers on supervision, among which only 12 assessed whether clinical supervision was related to client outcomes from therapy. Postgraduate trainee experience of clinical supervision was assessed in a survey sent to all first year clinical psychology students enrolled in a clinical psychology program in Australia. One hundred and ninety students (approximately 55% return rate) returned the survey. The literature review suggested supervision has three main functions: formative (the development of supervisee skill and competency), normative (the maintenance of professional standards) and restorative (support, emotional processing and personal development). The empirical literature establishes that specific forms of clinical supervision do enhance supervisees' clinical skill development, self-efficacy and professional resilience. The process and content of supervision predicts the client-therapist working alliance, client retention in therapy and possibly client outcomes. A substantial limitation of current methods of supervision is the reliance on unreliable sources of information, particularly the verbal reports of supervisees, to assess supervisees' clinical competence and clinical outcomes for clients. The survey of current Australian clinical psychology students shows that students regard supervision as the most effective teaching method for learning clinical psychology. However, students' self-report of

therapy process is the most widely used method of monitoring the student's therapeutic competence. In contrast direct observation of student therapy, participation in co-therapy and reviews of recording of therapy by supervisors is much less frequently used. The effectiveness of supervision within clinical psychology is likely to be enhanced by more frequent direct monitoring of supervisees' competence, and attention to the contingencies on supervisors for providing the normative function of quality control over therapy delivery.

Keywords: *supervision, clinical psychology training*

Training in clinical psychology in regional Australia

HELMES, E. (James Cook University)

The Australian population is concentrated in capital cities, and clinical training programs at the large urban universities tend to be better resourced than those at smaller, regional universities. It is not known whether the quality of training differs between regional and urban universities and whether students differ in their experiences during clinical training. During semester 2, 2009, first-year postgraduate clinical psychology students were surveyed. Students from 20 of the 35 universities provided responses, with 29% of the 190 students being from regional universities. Survey questions covered ratings of the quality of training, teaching methods used, effectiveness of teaching methods, responsiveness to student needs, assessment methods used in the program and their effectiveness, monitoring of therapeutic work and therapy workloads, exposure to clinical research, clinical supervision, and overall workload and stress levels. Comparisons were made between urban and regional universities on the 55 items that were surveyed. As an exploratory study, two-tailed tests with $\alpha = .05$ were used. Five items showed differences between urban and regional training programs. Students rated the effectiveness of lecturers using their own clinical cases as higher among urban training programs, and also the use of portfolios of client work as an assessment method. Students at urban universities were also monitored by video tape recordings more

frequently and exposed to clinical research of their teachers more frequently. Finally, students at urban universities were significantly less likely to consider a placement in a rural setting compared to those at regional universities. At best, students indicated a moderate interest in undertaking a placement in a rural setting. Overall, there were more similarities between urban and regional training programs than there were differences. Where there were differences, they tended to favor the urban universities in terms of training that was illuminated by both clinical work and clinical research of the teaching staff. Such differences are also associated with the other resources available in larger universities. Nonetheless, the lack of differences in perceived quality of training and the majority of other aspects suggest that training across Australian universities is largely comparable in both urban and regional environments.

Keywords: *urban, regional, training, clinical*

Online provision of psychological services by trainee clinical psychologists: A model, initial experiences and implications for defining competence in electronic service provision

MURRAY, G. (Swinburne University), KYRIOS, M. (Swinburne University)

E-therapy is a federally-supported modality of psychological service provision, as exemplified by Anxiety Online (www.anxietyonline.org.au), based at Swinburne University of Technology and launched in November 2009. E-therapy raises many issues for the training of clinical psychologists, particularly in relation to defining competencies for electronic modalities of service delivery. In this context, the present paper aims to introduce and critically discuss Anxiety Online as a placement for clinical psychology trainees. Literature on the evidence base for e-therapies is reviewed, with a focus on data showing that therapist-assisted online CBT treatments may be superior to self-help versions. The Anxiety Online model will be introduced in detail, and the steps taken to roll out Anxiety Online through clinical psychology programs discussed. Data from the first 6 months of

operation of the service will be presented. There is strong evidence for the efficacy of online CBT for anxiety and other emotional disorders, especially when the client/patient has access to an online therapist to assist their progress through treatment. Similarly, there are strong a priori grounds for arguing that a range of clinical competencies can be developed through trainees' participation as therapists in such programs. The federal Department of Health and Ageing has recognized this service provision/training synergy in the large-scale funding of Anxiety Online. However, the relevant accrediting bodies (e.g. APAC, the APS College of Clinical Psychologists) do not have fully formed positions on electronic service provision. Clinical placements with Anxiety Online are currently recognized as client contact hours by the Counselling College, but as "other placement hours" by the Clinical College. Guidelines for describing competencies that are (and are not) developed by online therapy provision are urgently required. One challenge facing Clinical Psychology training in Australia over the next decade is to engage with the reality of online service provision. Fortunately, there is momentum around this issue nationally. The scrutiny of Anxiety Online from various perspectives (government, the profession, the university sector, and the public) provides a unique opportunity to open up and rapidly progress debate on the clinical psychology competencies that are demanded by, and trained through, online therapy.

Keywords: *online therapy, competencies, training, e-therapy*

Can Problem Based Learning integrate the junkyard curriculum in clinical psychology?

BAILLIE, A. (Macquarie University, University of New South Wales), PROUDFOOT, H. (Macquarie University, University of New South Wales)

Problem Based Learning (PBL) is a constructivist educational method that originated in the undergraduate medical program at McMaster University and has become popular in medical education. The key features of the method are that teaching takes place in small groups focused on realistic

clinical problems facilitated by a tutor whose role is to facilitate application of existing knowledge, to facilitate the identification of gaps in knowledge, and to facilitate learning goals. New information is typically found by learners outside the tutorial and reported back to the tutorial. The method is thought to establish lifelong learning and so may have appeal in clinical psychology training programs. What then would be the likely costs and benefits of changing to a PBL based clinical psychology training program? As part of this study a narrative literature review was conducted. Few papers reported on the use of PBL in clinical psychology and none reported empirical outcomes so we turned to literature on the effectiveness of PBL in postgraduate education in any health profession. There are few randomized trials. Learners prefer PBL based small group learning compared to large format didactic lecturers and believe they have better outcomes. However there are few differences in short and long term outcomes compared to traditional teaching methods. One review concluded that the costs of changing to PBL are considerable. PBL has not been specifically evaluated in clinical psychology but has shown few advantages over traditional teaching methods in the training of other health professionals. The cost of switching to a PBL model may be substantial. Existing clinical psychology programs may use a range of teaching methods in an uncoordinated and piecemeal fashion and so may benefit from a more coordinated and coherent match of teaching methods to the content or aims of training. Alternative teaching models are briefly discussed.

Keywords: *problem-based-learning, clinical psychology*

Fitness to Practice

SOFRONOFF, K. (The University of Queensland),
HELMES, E. (James Cook University)

The past decade has seen a groundswell of policy related to the introduction of formal Fitness to Practice (FTP) assessment for students enrolled in tertiary programs that lead to professional qualifications. It is recognised in some quarters that such a policy

is essential for programs with a clinical orientation whereby students gain a license to practice. There are, however, difficulties that arise in the measurement of the construct of 'fitness' and in the implementation of such policies with many believing that students should only be assessed on academic performance and that non-academic evaluation of suitability is contrary to the role of a university. The literature base for discussion of FTP comes most strongly from schools of medicine and from social work. There is relatively little discussion in the psychology literature about evaluation of FTP or suitability for the profession. We draw data, however, from a survey of Clinical Program Directors and from a clinical program that is currently using an FTP protocol. The paper will outline issues and concerns related to FTP, for example the need to balance the university's duty of care to students, placement agencies and clients. There is a clearly identified need for students to be prepared "emotionally, behaviourally and ethically" for being on a placement and this is currently often not assessed in any formal manner. Some of the factors relevant to FTP include a student's physical or mental health, interpersonal skills, violation of ethical codes, demonstrating a risk to others and being unable to undertake required placement or professional activities. The notion of a formal FTP policy is still controversial in many university settings with individual program directors facing difficulties in finding a way to exit a student who may be considered unfit for the profession on non-academic grounds.

Keywords: *fitness to practice, assessment, training*

Regulatory focus and decision making processes: Weighing risks and benefits

Chair(s): KOEHLER, T. (The University of Melbourne)

Discussant(s): ROE, R. (The University of Maastricht)

Regulatory Focus Theory (Higgins, 1997, 1998) proposes that two orthogonal self-regulatory processes underlie goal achievement: promotion and prevention focus. Each of these motivational foci differs in their influence on decision making and cognition (Higgins, 1997, 1998); while a promotion focus entails an attention to desires and positive outcomes, a prevention focus is based on attention to obligations, responsibilities, and negative outcomes. It is reasonable to assume that an individual's predispositions (traits) towards preventing losses versus promoting gains will have a significant impact on decision making processes and the subsequent decisions which are made. The aim of the current symposium is to look at the influence of these two trait-based regulatory foci on decision-making processes in five different decision-making contexts. Moreover this symposium will explore how context specific cues trigger state promotion versus prevention orientations and how these orientations affect preferences regarding decision-making. Key learning objectives from this symposium include: 1) understanding how both trait and state promotion and prevention focus affect decision-making processes in different contexts, i.e., decision-making with regard to voting behavior, paying taxes, deceptive behavior, and job choices. 2) exploring the cognitive and affective dynamics underlying the relationship between regulatory foci and decision-making processes such as assessing the role that promotion and prevention focus play in the framing of information and the creation of preferences. The breadth of the outcome variables in the current symposium highlights the universal utility of the regulatory focus concept for explaining behaviors related to the decision-making process. Implications from this research will be applicable to many related concepts in Work and

Organizational Psychology such as the influence of affectivity and Goal Orientation on important organizationally relevant variables. Furthermore, the variety of data collection and data analytic methods in combination with the diversity of nations and populations from which data were collected suggest that the findings presented in this symposium are highly reliable and generalizable. Implications from the research will be discussed by an eminent scholar in the field of motivation research and work psychology who will critique the papers and provide an outlook on opportunities for future research.

Regulatory focus and political decision making: When people favour reform over the status quo

BOLDERO, J. (University of Melbourne), HIGGINS, E. (Columbia)

The present two studies were designed to examine the impact of self-reported use of promotion- and prevention-focused strategies on "risky" or "conservative" decisions about economic reform when economic conditions are described as average. Study 1 examined the impact of individuals' chronic regulatory focus on strategy use, whereas Study 2 examines the impact of manipulated regulatory focus. In Study 1, participants chronic regulatory focus was assessed using Higgins, Friedman, Harlow, Idson, Ayduk, and Taylor's (2001) 11-item Regulatory Focus Questionnaire whereas in Study 2 regulatory focus was manipulated by asking participants to write about either their personal hopes and aspirations or their personal duties and obligations, thus experimentally inducing either a promotion or a prevention focus, respectively (e.g., Freitas, Liberman, & Higgins, 2002). They then read an economic report that was designed to portray Australian economic conditions as average in the preceding financial year and that expressed that the Australian Government had decided that Australia's economic future could only be assured by sweeping economic reforms (i.e., those that were risky). Further, it was stated that the Government wished to introduce a range of economic reforms. Participants then indicated whether or not they supported the proposed

reforms. In both studies, consistent with Regulatory Focus Theory predictions (Higgins, 1997, 1998), prevention strategy use was associated with the conservative choice and promotion strategy use was associated with the risky choice. In Study 2, identical effects were found for manipulated regulatory focus. Furthermore, being prevention focused was associated with prevention strategy use. Being promotion focused was associated with promotion strategy use by those who reported that current economic conditions were relatively poor. These studies are the first to demonstrate that the self-reported use of promotion and prevention strategies are associated with “risky” or “conservative” decisions and that strategy use is associated with being promotion or prevention focused when conditions are described as average.

Keywords: promotion, prevention, risky decision-making, conservative decisions, reform

Unlocking decision risk – the impact of self-regulatory focus on risky decision making

THA THAN, P. (University of Melbourne), BARSKY, A. (University of Melbourne)

According to prospect theory, people’s attitudes toward risks concerning gains may be quite different from their attitudes toward risks concerning losses. Thus, the framing of the same problem can have significant impact on individuals’ risk preferences (Kuhberger, 1998). The questions, when and why a riskier alternative is preferred over a safer option, however, is still debated among scholars. The aim of this research paper is to shed more light and enhance our knowledge on decision risk by applying the motivational principle of self-regulatory focus, which is concerned with how people are motivated to experience pleasure and avoid pain in different ways. Following an extensive literature review, we developed a conceptual model of decision risk using regulatory dispositions (promotion and prevention foci) as the main predictors of risky choices, as individuals attempt to achieve gains (pleasure) and avoid losses (pain). This model takes into consideration important contextual factors such as one’s outcome history, which has been shown to have significant influence

on people’s risky choices. Based on the strategic inclinations described by Higgins (1997) and the empirical findings that have been reported, the model suggests that individuals with a promotion focus will prefer riskier choices in search for gains, while individuals with a prevention focus will prefer less risky choices as a means to avoid losses. However, such predictions may alter when one’s outcome history is also factored into consideration. Consistent with traditional studies, this model will rely on individuals’ subjective value of gains and losses and perceived outcome uncertainty (the distortion of probabilities) to help predict and explain the findings. The suggested model highlights how the application of regulatory focus theory can help improve our understanding of the mechanisms that influence risky decision making by individuals. The theoretical proposition of promotion and prevention value functions (subjective values) and the variations in perception of probabilities delve deeper into the topic of risky choices, thus unifying our knowledge of decision risk. Most notably, we would have the means to predict when and why a risky alternative is preferred.

Keywords: decision risk, self-regulatory focus, risky decision-making, prospect theory, contextual factors

How to inform the public about the use of public finances? Framing information, regulatory fit of recipients and tax compliance

KIRCHER, E. (University of Vienna), HOELZL, E. (University of Vienna)

Information campaigns on taxes and spending policy of the government as well as the provision of public goods can improve both citizens’ understanding and acceptance of taxes and their compliance. Information campaigns can either focus on the advantages of taxes for the collective or on disadvantages in case of tax evasion. We argue that information campaigns are more effective if the messages correspond to recipients’ regulatory focus. A 3 x 2 between-subjects design with regulatory focus (promotion vs. indifferent vs. prevention) and goal-framing (positive vs. negative) as independent variables

was used to investigate effects on tax compliance as dependent variable. Regulatory focus of participants was assessed by a questionnaire which yielded data to split the sample into a group with predominant promotion focus and a group with predominant prevention focus. In the second study, a 2 x 2 between-subjects design with situational regulatory focus (promotion vs. prevention) and goal-framing (positive vs. negative) as independent variables and tax compliance as dependent variable was used. ANOVAs with goal-framing and dispositional regulatory focus in study 1 and goal framing and situational regulatory focus in study 2 as independent variables and tax compliance as dependent variable were performed. The interaction between regulatory focus and goal framing was in both studies significant. Consistent with the hypothesis, tax compliance was higher under conditions of regulatory fit. We argue that the effectiveness of positively and negatively framed information about the use of tax payments for public goods and the consequences of tax behaviour depend on recipients' regulatory focus. Neither framing can be considered as generally more effective. In two studies, interaction effects between regulatory focus and goal-framing on tax compliance were found. For recipients under promotion focus, information highlighting the potential gains increased tax compliance; for recipients under prevention focus, information highlighting the potential losses increased tax compliance. The effect of regulatory fit held for both dispositional and situational regulatory focus.

Keywords: public finances, framing information, regulatory fit, tax compliance, information campaigns

Regulatory focus and deceptive behavior: Avoiding blame versus over claiming credit

SANKEY, M. (University of Melbourne), BARSKY, A. (University of Melbourne)

The psychology of credit and blame assignments as well as organizational factors facilitating these behaviors have received considerable research attention. However, little is currently known about the types of

people who are more prone to committing these deceptive acts. The current study suggests that regulatory focus theory will aid in predicting the deliberately unethical acts of taking credit and avoiding blame. Assignments of credit and/or blame are considered to be thought out, conscious acts that result from an individual's calculated decision making process. In organizations, vital rewards (e.g., positive feedback, bonuses, respect) hinge on credit for perceived success. Conversely, punishments (e.g., negative feedback, pay cuts, derogation) hinge on blame for failure (Grant & Bateman, 1993; Jackall, 1983; Gibson, 2003). Given that promotion-focused individuals are more sensitive towards positive outcomes (i.e. gains and non-gains), it is hypothesized that they would be more inclined to commit the deceptive act of taking credit for others' success in order to increase the likelihood of attaining a positive outcome (e.g. being promoted). In contrast, as prevention-focused individuals are more oriented towards negative outcomes (i.e. losses and non-losses); it is hypothesized that they would be more inclined to commit the deceptive act of avoiding blame for their own failure in order to increase the likelihood of avoiding a negative outcome (e.g. being fired). Moreover, it is predicted that such behaviours are more likely to occur when individuals pursue a goal in a manner that sustains their regulatory orientation. Data will be collected through an online quiz show using approximately 200 undergraduate students. Other measures will include surveys of trait regulatory focus, conscientiousness and demographic variables. Data will be analyzed using multiple regression. Data analysis is underway and results will be presented at the conference. Our paper makes three significant contributions to the literature. First, we introduce regulatory focus as a predictor of deceptive workplace behavior. Second, we examine the interplay between chronic and situational regulatory focus and deceptive workplace behavior. Finally, we address the dearth of literature comparing blame and credit patterns (see, e.g., Gibson, 2003; Grant & Bateman, 1993).

Keywords: regulatory focus, deceptive behavior, blame, credit, decision making

The role of regulatory focus in occupational decision making: An integration with personality and cultural values

KOEHLER, T. (University of Melbourne),
KURTESSIS, J. (American Institutes for Research)

Though both personality and cultural values have been empirically linked to occupational interest and the career development process (Barrick, Mount, & Gupta, 2003; Hartung, Vandiver, Leong, Pope, Niles, & Farrow, 1998), Kluger's (2004) suggestion that regulatory focus may be related to occupational interest remains unexamined. We hypothesize that promotion focused individuals strive for jobs that contain more novelty, non-routine tasks, risk, and opportunities for growth and innovation. Prevention focused individuals strive for jobs that are safe, contain more routine tasks and highlight compliance. The current study integrates previous research on regulatory focus, personality, and cultural values to examine their influence on occupational decision making. Data was collected through an online survey-based study of 521 undergraduate students, of which 187 students (36%) identified themselves as international students (i.e., born outside the US). Measures included surveys of trait regulatory focus, the Big Five personality characteristics, self-efficacy, locus of control, and preferences for job characteristics (outcome variable). The data was analyzed using multiple regression. Results show that personality factors predict regulatory focus. Some narrow bandwidth facets of personality and interactions between the personality factors contributed incremental variance beyond these broad personality factors. Results further suggest that the relationship between several personality facets and preferred job characteristics was mediated by regulatory focus. Lastly, we found a significant moderating effect of cultural values on the relationship between regulatory focus and preferred job characteristics. Our study is framed within well researched theories of job characteristics and motivation, and contributes to the current literature in several ways. First, we examined the unique predictive ability of narrow bandwidth facets of personality

beyond that of broad bandwidth factors. Second, we have answered calls in the literature to integrate theories of personality and motivation when examining preferred job characteristics (e.g., Barrick et al., 2003), and lastly we extend the regulatory focus and personality literatures by incorporating the moderating role of cultural values. Future research has to extend the exploration of regulatory focus as a mediator and the role of cultural values as a moderator for the relationship between regulatory focus and job-related outcomes variables.

Keywords: regulatory focus, occupational decision making, personality, cultural values, big five model of personality

Research on the teaching and learning of Australian university psychology: Evidence-based innovations for improving student learning

Chair(s): REECE, J. (School of Health Sciences, RMIT University)

There is active, dynamic and influential research on the teaching and learning of university psychology being conducted in Australia, and this symposium will present the findings from four studies to illustrate the current state of the field. The four papers explore different aspects of the scholarship of teaching and learning, and use a variety of methods, but a common thread among these studies is a commitment to scientific rigour in the quest for evidence-based innovations for improving student learning. The four studies cover a diverse range of teaching and learning areas: postgraduate clinical training, peer review of university teachers, perspectives on feedback, and critical thinking in first-year students in the context of developing their appreciation of research methodology. Each of the studies is based on a sound theory of pedagogy, and both qualitative and quantitative data inform the outcomes. These studies are all eminently practical, and describe the evaluation of teaching innovations that can be easily incorporated into practice. The learning objective of this symposium is simple but powerful: to provide teachers of psychology with “food for thought” by presenting a range of evidence-based innovations for teaching and learning. In addition, it is hoped that involvement in the symposium will facilitate collaborations among the key players in the scholarship of teaching and learning of psychology in Australia—the Australian Psychology Educators’ Network (APEN) and the Teaching, Learning and Psychology Interest Group of the Australian Psychological Society (TLPIG)—and their international counterparts.

Hard science and soft heads: Critical and creative thinking in the context of first-year group research projects

REECE, J. (School of Health Sciences, RMIT University), CRANNEY, J. (Department of Psychology, University of NSW)

One of the aims of a special course for first-year psychology majors is to introduce them to the psychological science (compared to ‘folk psychology’) way of thinking, by having them engage in a range of research-related activities. First, in this research, students are participants in an experimental study, which they then write up as a research report in scaffolded stages. In subsequent lecture and practical sessions, they undertake a number of exercises, including operationalising variables (e.g. ‘love’), designing hypothetical studies (thus discovering the advantages and disadvantages of quasi-experimental and experimental designs), and criticising mock research articles. Simultaneously, in small groups they are given a limited set of topics from which they develop research questions, leading to specific hypotheses, which they then test. This is their first experience in designing their own study to test a hypothesis, which includes operationalising variables, developing materials, and gathering and summarising data. The collaborative learning environment is essential at this transition stage, with the final step being the group oral presentation of their study. The results of this research showed that the ability to design a study improved from Weeks 1 to 11. Students rated in-class design exercises, and mock article critiques, as assisting development of this skill. Knowledge of cognitive fallacies and research methodology improved from Weeks 1 to 11. Students rated the in-class quizzes as contributing to this improvement. A distinction average mark was obtained on the capstone group research project; students indicated that they learnt more effective oral presentation skills and more about how to conduct research. In conclusion, both objective indicators as well as student evaluations suggest that this introduction to psychological science is an intense but rewarding experience. Overall, students are well on their way to becoming “psychologically literate citizens”.

Keywords: *psychological science learning, research, research methodology, students, learning*

Peer review of teaching: A five-stage model for building communities of reflective teaching practice

CHESTER, A. (School of Health Sciences, RMIT University), KIENHUIS, M. (School of Health Sciences, RMIT University)

This paper examines the development, implementation and evaluation of a peer review of teaching (PRoT) pilot amongst psychologists and other health science academics. The ten staff participating in the program (six males, four females) included relatively new and more experienced colleagues. A reference group developed a 5-stage cyclical model of PRoT in which participants were randomly allocated to cross-disciplinary pairs, attended training in PRoT and took turns to be both reviewer and reviewee. Review documents were collected and analysed and all participants interviewed about their experiences. Although the pilot was not restricted to face-to-face teaching, the majority of reviews focused on in-person classroom practice. At the completion of the pilot participants expressed their enthusiasm for PRoT, noting the value of the cross-disciplinary, reciprocal model. PRoT was perceived to be important in the development of a community of collegial, reflective practice. In this presentation participants in the pilot will describe their first-hand experiences. In addition, the effective characteristics of the program will be examined and potential limitations explored.

Keywords: *Peer review, teaching, Cross-disciplinary education, Collegial practice, In-person classroom practice*

Comparing student and academic perspectives on feedback: Discrepancies, challenges and moving forward

ELGAR, K. (Discipline of Psychology, School of Health Sciences, RMIT University)

A common student perception of feedback in higher education is that it is often lacking in

detail, usability, and timeliness; however, many staff members resent the lack of investment students place on engaging with, or even collecting, feedback on work. Despite increasing recognition of the role of feedback in student learning and course satisfaction, few studies have sought to contrast student and academic perspectives of feedback in a discipline to identify reasons for why this frustration occurs. This paper highlights the key similarities and differences in the conceptualization, use and preference for feedback observed between staff and students in the Discipline of Psychology at RMIT University, following a detailed survey of their feedback practices. Further to this, demographic, academic, and personality variables are explored to help explain what predicts feedback preferences and feedback satisfaction in both staff and students. Guidelines and good practice suggestions are provided to assist staff in overcoming the discrepancies between student and academic perspectives on feedback.

Keywords: *higher education, work feedback preferences, course satisfaction, student learning, academic feedback*

Objective structured clinical examinations in clinical psychology: A pilot study

YAP, K. (Discipline of Psychology, School of Health Sciences, RMIT University)

Although there is agreement among psychologists on the importance of core competencies in clinical practice, there is a lack of research and development into the assessment of these competencies. Supervisor ratings remain the main method of assessing clinical competence, even though they are highly subjective and unreliable. The aim of this study was to examine the use of an objective structured clinical examination (OSCE) for the assessment of clinical interviewing skills in a Clinical Psychology program. Used in most medical schools internationally, the OSCE requires students to undertake a series of stations which simulate clinical situations. In each station, students perform a structured clinical task with a standardised patient (a trained actor) while being observed by an examiner. The student's

performance is rated using a standardised scoring sheet. Participants were first year Doctor of Psychology (DPsych) students at Monash University ($n = 9$). There were seven OSCE stations (five 16-minute and two 8-minute stations) with a wide range of psychological presentations. The Spielberger State-trait Anxiety Inventory was administered before and after participating in the OSCE. Participants also completed a post-OSCE 13-item survey. The results showed that participants experienced significantly higher levels of pre-OSCE state anxiety ($M = 51.8, SD = 14.9$), compared to post-OSCE state anxiety ($M = 40.2, SD = 9.1$), $t(8) = 3.339, p = 0.01$. In general, students agreed that the OSCE was a valid assessment of their clinical interviewing skills and noted that the stations were realistic and relevant to their course. Mean scores across all 12 stations indicated a pass standard performance by the majority of participants. Students noted in their post-OSCE survey that the assessment was a worthwhile exercise and supported its inclusion into the DPsych program. However, they were less certain about whether it provided a fair assessment and felt that performance was affected by anxiety. Several students suggested that the OSCE would be more effective as a formative rather than a summative assessment tool. In summary, this pilot study indicates that students were receptive to OSCEs, but may require more preparation for the examination process to reduce performance anxiety.

Keywords: objective structured clinical examination, clinical training, clinical interviewing skills, assessing clinical competencies, student assessment

Restoration and restorative environments

Chair(s): HARTIG, T. (Uppsala University)

Recent years have witnessed rapidly growing interest in the health resource values of natural environments. A core component of the work in the area concerns the processes that mediate between experiences in natural environments and outcomes relevant to health. To date, processes of stress reduction and attention restoration have received the most attention. In line with this emphasis, the present symposium brings together researchers who are working with a variety of practical issues that involve restoration and the restorative values of nature experiences. Their presentations will inform you about conditions from which people need restoration; some of the processes that fall under the restoration rubric; some of the ways in which socio-physical environments create a need for, work against, or promote restoration; and environmental design and management efforts and approaches to therapeutic intervention that can benefit from knowledge of the restorative values of natural settings. After this symposium, participants will be able to: (1) distinguish and describe basic types of psychological restoration addressed in research on nature as a restorative environment, (2) describe some of the ways that natural settings and elements of nature are or could be used in health care contexts, and (3) give examples of the use of psychological research on restorative environments in efforts to address environmental design and management problems and to enhance therapeutic interventions.

Using agricultural land as restorative places in densely built environments? An experimental study

MARTENS, D. (Swiss Federal Research Institute WSL)

Due to increasing residential density in many European cities, pressure on public natural

environments is growing; a shrinking area of natural environments is called on to serve more people seeking psychological restoration. Close-to-urban areas are often cultivated agriculturally and could serve restoration reasons. The growing interest in organic food leads to different agricultural management, which eventually has an effect on the aesthetic perceptions of users seeking restoration. We combine the field of restoration psychology with land use planning questions, aiming to positively influence people's everyday restoration: what effect does the management strategy have on human restoration and well-being? An experimental design compares the effect of extensively versus intensively managed agricultural land. Video presentations of both conditions and a walk on a treadmill serve as the treatment. Participants, a representative sample of Zurich, Switzerland, are randomly assigned to either film, or to a control group, watching no film. All participants walk on a treadmill individually to exclude effects arising from physical activity or social interaction. The Perceived Restorativeness Scale assesses the perceived restorative quality of each treatment. Additionally, psychological well-being is measured by standardized scales before and after the treatment, and in a follow-up measure to analyze longitudinal effects. Group differences are analyzed by a between-subject covariance analysis. We expect differences between the effects of extensively versus intensively used agricultural land concerning psychological well-being. The subscale scores of the Perceived Restorativeness Scale might explain these differences, mediating the effect of the environmental manipulation. The effect of physical activity can be excluded as an alternative explanation due to the control group, which was active though without perceiving an agricultural environment. The results contribute towards conceptualizing further research in the field of restoration psychology by distinguishing different natural conditions, measuring their specific perceived restorativeness. Aside from this, practical implications for environmental development can be drawn. Close-to-urban natural areas in particular could serve the need for restoration from everyday demands for urban visitors.

Keywords: *restoration psychology, Perceived Restorativeness Scale, urban areas, agricultural, environment*

A multidisciplinary study on the relations between the ecological characteristics of urban green spaces and users' perceived benefits and well-being

CARRUS, G. (University of Roma Tre)

Green areas in the urban environment represent an opportunity for promoting human health and well-being. From an applied viewpoint, it is important to gain a better understanding of the relationships between the physical characteristics of green spaces and the psychological processes leading to perceived psychological benefits and well-being, in order to develop more effective health promotion strategies. The study is part of a multi-disciplinary research program supported by the Italian Ministry of Scientific Research as a "Research Project of National Interest". We aimed at investigating the relations between structural characteristics of urban green areas (e.g., amount and naturalness of greenery) and psychological outcomes (e.g., perceived benefits and well-being). A set of possible mediating factors was also considered, including cognitive (e.g., attitudes towards and perceived restorativeness of green areas), affective (emotional reactions) and behavioural responses (e.g., activities performed). The role of frequency and duration of visits was also explored. A comprehensive model analysing the mediation effect of psychological factors and experience modalities in the relationship between greenery and well-being was tested. Four Italian towns at different latitudes were selected for the study (Bari, Rome, Florence and Padua). We identified 5 sites in each town, characterised by different amounts of greenery and different degrees of naturalness, ranging from *urban plazas*, with few trees and shrubs, to large *green areas*, with little presence of man-made elements. Participants ($N = 400$) were contacted at the different sites, and asked to fill in a questionnaire about their experience and attitude toward green areas. Preliminary results outlined a complex picture of people-green areas relationship and its effects on well-being. Subjects reported

different physical and psychological benefits from visiting urban natural environments. Specific behaviours were found to be associated with cognitive and affective responses to the green areas, and to different beneficial outcomes. Further analyses are in progress, to test the overall model, including mediated relations. This study has yielded encouraging preliminary findings on the role of experiences in green areas in health promotion. Results will be discussed with reference to psychological models of human well-being, and health-oriented management of natural environments.

Keywords: urban environment, health promotion, urban green areas, natural environments, well-being

The role of attention restoration in stress-reducing effects of indoor plants in a hospital room

DIJKSTRA, K. (University of Twente)

Natural environments have shown to hold potential stress-reducing properties. Previous research has demonstrated that the stress-reducing effects of indoor plants in a hospital room can be explained by the mediating effect of the perceived attractiveness of the hospital room (Dijkstra, Pieterse & Pruyn, 2008). When investigating the restorative effects of nature, the focus is often either on stress reduction (Ulrich's 1983 theory of psychophysiological stress-reduction) or on attention restoration (attention restoration theory, Kaplan & Kaplan, 1989). The specific relation between the two processes is hardly ever considered. The current study therefore included measures for both attention restoration and stress reduction. This study aimed to shed more light on the specific role that attention restoration plays in stress-reducing effects of indoor plants in the built healthcare environment. A single-factor between-subjects experimental design (nature: indoor plants vs. no plants) was used in which participants ($n = 87$) were presented with a scenario describing hospitalization with appendicitis. Subsequently, they were exposed to a photo of a hospital room. In this room were either indoor plants, or a control condition in which no indoor plants were present. Afterwards, perceived stress,

perceived attention restoration, and perceived attractiveness of the hospital room were measured. Exposure to the hospital room with indoor plants evoked reports of lower perceived stress, greater perceived attention restoration, and a higher perceived attractiveness of the hospital room. Moreover, a series of mediation analyses demonstrated the specific relationship between those variables. The hospital room was perceived as being more attractive when indoor plants were present. This subsequently led to attention restoration, which in turn resulted in participants feeling less stress. The current study demonstrated that exposure to a hospital room with indoor plants leads to attention restoration and less stress. Moreover, our study demonstrates how the concepts of attention restoration and stress are related. Furthermore, this study provides insight into how the beneficial effects of indoor plants come about.

Keywords: natural environments, indoor plants, hospital, attention restoration, stress

Attentional effort and restoration in mindfulness meditation training

LYMEUS, F. (Uppsala University), HARTIG, T. (Uppsala University), LUNDGREN, T. (Uppsala University)

Mindfulness-based stress reduction (MBSR) programs may ultimately help people to better avoid stress as they manage the demands of everyday life. Such programs initially require effortful directed attention from their participants, so the benefits of mindfulness practice may not be realized during the initial training. The present study assessed the effects of mindfulness training on attentional capacity, both during practice sessions and over the longer term, as program participants acquired competence in mindfulness practice. Our examination of short-term effects considered the moderating role of an environmental enhancement; we compared change in attentional capacity during practice with and without nature imagery. University students ($N = 51$) were randomly assigned to either an 8-week MBSR program or a waiting list control group. Program participants were further randomly assigned to weekly training sessions

with or without the projection of nature images during a practice period. Members of the control group attended weekly rest sessions with the same duration as the mindfulness practice sessions, but they only viewed the nature images. At an initial training session (T0) and at every other session thereafter (T1-4), the subjects completed the Necker Cube Pattern Control Test (NCPCT) and Letter–Digit Substitution Test (LDST) before and after the period (20-min) allocated for practice/rest; the measures at T0 are reference values. Control group members, who watched nature images during the rest session, improved in LDST performance on average, consistent with attention restoration. In contrast, mindfulness program participants showed pretest-posttest declines in performance; practice apparently required attentional effort. The decrement was only slightly smaller with the group that practiced with nature images. The program participants and control group members had a similar pattern of improvement in pretest attention scores from T0 to T4. Initial attention scores predicted frequency of practice and attendance at training sessions; those with less initial attentional capacity participated less. Attentional effort required by mindfulness training may hinder its adoption by those people who might benefit the most. For them, regular, brief periods spent in natural or other restorative environments may work as an alternative, alone or as preparation for mindfulness training.

Keywords: mindfulness training, stress reduction, restorative environments, nature imagery, attention restoration

Restorative environments: New researchers, new questions

Chair(s): HARTIG, T. (Institute for Housing and Urban Research, Uppsala University)

As a complement to research on environmental stress, research on restorative environments has been drawing the attention of increasing numbers of researchers and practitioners in the environment-behavior-design field. This symposium brings together four new contributors to restorative environments research, all of whom are using psychological theory and methods to specify and address knowledge gaps. Their presentations will cover diverse aspects of restorative processes and the environmental characteristics that promote (versus merely permit) restoration.

Work and restoration in open-plan offices during different sound exposures

JAHNCKE, H. (Laboratory of Applied Psychology, Centre for Built Environment, University of Gävle)

Research on restorative environments has so far paid little attention to how environmental sounds might affect restorative processes. The aim of the present study was to investigate cognitive, emotional, and physiological effects of different office sound conditions during work and rest periods. Adults ($N = 37$) went through one practice session and two experimental sessions. In each experimental session they worked for two hours on attentionally demanding tasks, and then had a 14-min period for rest. Sound was manipulated in both the work and rest periods. Sound during the work periods varied across the experimental sessions in terms of sound level and amount of irrelevant speech (30 LAeq + little irrelevant speech versus 60 LAeq + much irrelevant speech). Sound during the rest periods varied across the two experimental sessions in terms of watching a nature film in silence versus listening to noise without a film. Subjects performed two cognitive tasks (SART and Arithmetic) and rated their tiredness and

motivation at arrival, after the two hours of work and after the rest period. They also gave saliva and urine samples at different time points during the session. Preliminary results indicate the predicted effects of the sound manipulations during the work and rest periods on performance and self-reports of fatigue. The presentation will include a more detailed account of analyses, including those with the physiological data. The present study helps address a gap in knowledge concerning the effects of the aural environment on the depletion and restoration of adaptive resources.

Keywords: restorative environments, restorative processes, environmental factors, work, rest periods

Health benefits from natural elements in hospitals

BRINGSLIMARK, T. (Norwegian University of Life Sciences)

The study that will be presented is part of a larger research project in Norway that aims to investigate possible health benefits from natural elements in hospitals. The natural elements include window views to nature, pictures of nature, and natural materials such as wood. Within evidence-based design the main issue has been to create built contexts for healing by focusing on elements in the environment that can enhance the healing process, such as elements of nature. As part of the larger study we have first conducted a study on preferences for different degrees of wood in patient rooms by using employees at a hospital as an expert group. Some preliminary results from the larger study which also includes window view to nature and the inclusion of pictures of nature in patient rooms will also be presented. We used data-manipulated pictures of a patient room with different degrees of wood on a continuum from no wood to all wood. The room with no wood represents a standard patient room. An anonymous e-mail questionnaire was sent out to employees at a Norwegian hospital. The e-mail questionnaire was adjusted so that all the pictures were shown in a random fashion. The participants were asked to rate the pictures on twelve adjectives describing the room. All the

items in the questionnaire were taken from standardised measures related to preferences for both exterior and interior settings. The results indicated that it was the room with an intermediate level of wood that was the most preferred. This room was also rated as most Pleasant, Natural, Calming, and Secure, and as the least Boring room. The rooms on both end of the continuum were the least and second least preferred rooms. Hospital employees tend to prefer patient rooms with an intermediate level of wood. The results also indicated that standard patient rooms without wood were the second least preferred, whereas there are limitations to how much wood is preferred. Further research within this project will evaluate more directly the possible beneficial health effects of nature elements in hospitals.

Keywords: health benefits, hospital, natural elements, wood, healing

The contribution of small-scale patterns of natural scenes to restoration

JOYE, Y. (Philosophy Department, Centre of Logic and Analytic Philosophy, University of Leuven)

Up until now most experimental studies in restorative environments research have mainly investigated restorative responses toward natural versus urban environments/elements in their entirety. However, natural scenes are fractal, which means that – among others – visible structure and detail keep appearing as one progresses from the largest to the smallest scales of the scene. In contrast, most urban structures often lack (that degree of) visual detail on smaller scales. The main aims of the present study were (a) to investigate whether restorative qualities (e.g. “fascination”) are also associated with the smallest details of natural versus urban scenes and whether low-level structural features (i.e. complexity and coherence) contribute to this. 40 students participated in the experiment. The stimulus set consisted of sixty high-resolution photographs depicting both natural and urban content. The photos ranged, for example, from views of entire landscapes or streetscapes, to views of individual elements, such as individual trees or buildings. The images varied in coherence, complexity and distance from

which they were photographed. All photographs belonged to either of three categories: (a) they could either be images of the entire scene ($N=20$), (b) a detail taken from that entire scene ($N=20$), or (c) a further detail taken from this detail of the entire scene ($N=20$). The zooming ratio between the three image categories was held constant and the details were always extracted from the center of the source image. Subjects had to perform two tasks in the experiment. First, on a computer screen they saw the complete stimulus set in a random order and they were instructed to look as long at all the individual pictures until they found them no longer interesting to look at. For all pictures, viewing time was recorded. After this, in the second task, the subjects watched the images again and had to rate on a scale from 1 to 7 the degree to which the scene was coherent, attractive, complex, fascinating and whether it conveyed a warm glow. Preliminary analyses indicate that, on average, subjects watched the "natural" photographs significantly longer than the urban scenes. Moreover, it seems that for the images of details of the natural scenes viewing time increases on zooming in, whereas viewing time for the urban images declines for the pictures of urban details. This study for the first time addresses the issue whether the smaller scales of natural versus urban scenes are also a source of fascination, and hence might also contribute to the restorative character of natural scenes.

Keywords: restorative environments, natural elements, urban environment, photographs

Influence of human made objects on perceived restorative quality in natural environments: A virtual reality study

PALS, R. (Faculty of Behavioral and Social Sciences, Department of Psychology, University of Groningen)

Research has show that restorative characteristics commonly hold at a higher level in natural settings than in urban settings. Less is known about what and how specific features of the environment influence perceived restorative characteristics. In this study we looked at how the presence and design of human-made objects in a natural setting

influenced perceived restorative characteristics, preference and experienced pleasure. Virtual environments (VE) were used to systematically vary specific environmental features (street furniture) while keeping all other factors constant. Ninety-nine participants were randomly assigned to three virtual environmental conditions in a between-subjects design: a natural setting with metal street furniture (modern, unnatural design), a natural setting with wooden furniture (natural, organic design), and a natural setting without furniture. The study took place in a virtual reality theatre. Participants were exposed to a 3D presentation of the VE on a half immersive screen. After a 12 minute tour in the VE, participants evaluated perceived restorative characteristics of the environment, preference for the environment, and experienced pleasure in the environment. Also, respondents explicitly evaluated how well the street furniture harmonized with the environment. Preliminary results showed that when participants were explicitly asked to evaluate how well the furniture harmonized with the environment, the wooden furniture scored significantly higher than the metal furniture. However, when participants evaluated the perceived coherence of the environments on a more global level, no differences were found between the three conditions. We are currently conducting more detailed analyses, among which we examine the possible moderating effects of familiarity and personal need for structure. Results of these analyses will be presented at the conference. Although participants stated that the wooden furniture hamonized better with the natural environment than the metal furniture, the presence and design of street furniture did not influence perceived restorative characteristics, preference and experienced pleasure in the natural setting.

Keywords: restorative characteristics, natural settings, urban settings, preference, pleasure

Retirement transition and adjustment: Time perspective and patterns of change

Chair(s): HESKETH, B. (University of Western Sydney)

Discussant(s): ROE, R. (University of Maastricht)

The papers presented in this symposium illustrate strong theoretical perspectives relevant to the process of profiling transitions from full time employment through bridge employment and other transition activities to retirement. Time is a strong theme in the symposium, including time perspective, longevity estimates, and a longitudinal focus. Key learning objectives include: Understanding the role of theory in guiding research and practice; placing a focus on time related constructs in psychology, a neglected area; highlighting the importance of multiple patterns to transition, rather than a normative approach; introduction to innovative methodologies that both address longitudinal data, and provide an approach for measuring self-estimated patterns. The first paper uses longitudinal data from the USA Health and Retirement Study to examine the predictors of longitudinal change patterns of retirees' bridge employment status. The predictors included individual attributes, preretirement job-related variables, family-related variables, and retirement planning activities. The second paper highlights the importance of promoting retirement planning and a positive retirement adjustment, and explores the role of time perspective in achieving this. The paper presents data relevant to the relationship between time perspective, retirement planning and retirement adjustment, noting new factors in retirement adjustment. The third paper focuses on patterns of transition into retirement, presenting evidence that these are differentially predicted by individual, work and time variables. The authors take a P-E fit approach to retirement intentions and show how fit relates to retirement decision-making. The data for this study were collected at varying points throughout the changing impact of the

Global Financial Crisis, so the results also illustrate the effect of context on retirement intentions. The final paper presents a theory of retirement transitioning and decision-making that integrates key themes in organizational psychology research, drawing on the findings of the first three papers of this symposium to demonstrate how theory can guide future research and practice.

Profiling retirees' longitudinal change patterns of bridge employment

WANT, M. (Maryland University)

This study aims at examining the predictors of longitudinal change patterns of retirees' bridge employment status. The predictors we examined here included individual attributes (e.g., age, gender, years of education, self-report health, total wealth, and retirement income), preretirement job-related variables (e.g., work stress and job satisfaction), family-related variables (e.g., marital quality, marital status, and spouse working status), and retirement planning activities (e.g., psychological planning and financial planning). Using mixture latent Markov modeling, a subset of United States nationally representative longitudinal data ($N = 2713$) from the Health and Retirement Study that were collected in 1998, 2000, 2002, 2004, 2006 were analyzed. This subset of the data includes retirees who were not retired in 1998, but considered themselves to be retired in 2000. Retirees' bridge employment statuses over time were derived from Data collection in 2000-2006. Most predictors were derived from the 1998 data collection, except for retirement income. Three retiree subpopulations were identified according to longitudinal change patterns of retirees' post-retirement employment status: 43.1% of retirees in the sample were classified into the latent class for "stayers" who were never employed after their retirement; 14.8% of retirees were classified into the latent class for "stayers" who were always employed after their retirement; and 42.2% of retirees were classified into the latent class for "movers" who changed their previous employment status at some point during the span of the study. Results from mixture latent Markov modeling also showed that gender,

years of education, marital status, spouse working status, and marital quality were all significant predictors of these longitudinal change patterns of bridge employment status. This study confirmed that multiple longitudinal change patterns of retirees' bridge employment status do exist and they can be predicted by variables in different aspects of retirees' life. The findings support the dynamic perspective which emphasizes bridge employment as a longitudinal workforce participation process between one's retirement decision and entering full retirement.

Keywords: longitudinal design, retirees, employment, attributes, job demands

Exploring the influence of time perspective on retirement planning and adjustment

EARL, J. (University of New South Wales)

As the bulk of our international populations continue to age there are two important areas where psychology can contribute: promoting retirement planning and positive retirement adjustment. Time perspective (TP) may provide useful insights to the way that people view their past, present and future. This may influence the propensity to plan and cope with the future. This study explores the relationship between TP, retirement planning and retirement adjustment. In particular the paper reports on a study in which relationships between TP and retirement planning are replicated and new relationships between TP and retirement adjustment are explored. 570 retirees aged 45 years and older, recruited via the National Seniors Association, participated in the study. Participants were invited to complete an on-line survey that included demographic information (length of time retired, gender, age, education, household income), a shortened version of the Zimbardo Time Perspective Inventory (ZTPI), as well as pre and post retirement measures of Retirement Planning (RPQII). Hierarchical multiple regression analysis was used to compare the contribution of demographics and TP to pre and post retirement planning and to compare the relative contribution of demographics, TP and planning (pre and post)

to variations in retirement adjustment. TP accounted for additional variance in pre and post retirement planning beyond that explained by demographics. Future and Past Negative TP both predicted pre-retirement planning. Present Fatalistic TP negatively predicted both pre and post retirement planning. Contrary to expectations, but consistent with earlier findings, Present Hedonistic TP predicted both pre and post retirement planning in a positive direction. TP accounted for additional variance in retirement adjustment beyond that explained by demographics and planning. Analysis of the regression coefficients revealed that Past Positive TP and Present Fatalistic TP were predictors of retirement adjustment. As retirement adjustment increases, past positive TP increases but present fatalistic TP decrease. Results from our studies suggest that TP may provide important and additional insight to the process of retirement planning and in facilitating retirement adjustment. The possibility of designing interventions that encourage a past positive TP and address present fatalistic attitudes to time perspective are explored.

Keywords: retirement planning, positive retirement adjustment, time perspective, interventions, attitudes

Predictors and anticipated outcomes of planned retirement transition patterns

GRIFFIN, B. (Macquarie University)

Using the Theory of Work Adjustment (TWA) and self rated life expectancy as a framework we aimed to: 1) test transition patterns and their relationship to satisfaction and performance; 2) further explore self assessed longevity as a predictor of retirement transition; 3) test TWA P-E fit as a predictor of anticipated retirement satisfaction; e) Examine the impact of the Global Financial Crisis (GFC). Method: In collaboration with the NSW Department of Premier and Cabinet, a web based survey was administered covering demographic information, planned patterns of retirement, work values, and current and anticipated job satisfaction, and well being, health and financial status. Questions also addressed intended activities during

retirement, extent of planning, and self rated competence in managing retirement. Data were available from 3157 respondents from six public service agencies, representing 12% of their workforce. The median age was 45-54, and just over half were female. Participants self nominated into one of three patterns of anticipated retirement transition: A) Fulltime or part-time/ casual work, followed by retirement with no work (32.6%); B) Fulltime or part-time/casual work, official retirement, then part-time paid work either related or unrelated to previous work, leading to no work (33.1%); and C) Fulltime or part-time/casual work, switch to part-time or reduced hours, followed by official retirement with no work (34.3%). Among other differences, those with lower income or less education chose A over B or C. Self assessed longevity affected anticipated retirement age. Planned patterns of activity and satisfaction in retirement mirrored current values, providing support for the PE Fit framework. The GFC affected 20% of the respondents, mainly those planning to retire in the next three years. The data provide additional support for earlier retirement research and highlighted the varied patterns of transition intentions of current late-career workers. Support was found for a P-E fit approach within a self-assessed longevity framework, but noting the impact of external factors such as the GFC and changing Government superannuation rules.

Keywords: planned retirement, transition patterns, satisfaction, performance, Global Financial Crisis

From theory to practice in retirement decision-making and transition planning

HESKETH, B. (University of Western Sydney)

This paper has theoretical and practical aims. Theoretically it aims to draw upon the three studies presented in the symposium and other retirement research to highlight the relevance of several key psychological perspectives on retirement planning, namely: 1) career paths and patterns – developmental career theories; 2) P-E fit and adjustment theories; 3) time related issues in decision-making including time discounting; 4) goal setting and project planning. Practically, the paper aims to put

theory and data to practice by presenting a structure for retirement decision-making and transition planning. Data will be synthesized from the three presentations and a review of the literature to highlight the relevance of the frameworks. With lessons learned from research on errors in training, and the development of adaptive skills, these frameworks will be used to outline approaches and materials that can be developed in retirement planning packages to provide greater assistance to those planning retirement in the context of changing financial and governmental regulations. The result of this synthesis will be presented in the form of practical ideas and activities that can be adapted and used in future research on retirement planning, and provide a basis for applying the growing body of evidence relating to adaptive performance to adaptation to retirement. It is hoped that this paper will synthesize the research presented in the symposium, providing an opportunity for commentary by the discussant.

Keywords: retirement, decision making, transition planning, adjustment theories, goal setting

Self-related concepts in the understanding and treatment of psychopathology

Chair(s): MOULDING, R. (Swinburne University of Technology)

Discussant(s): KYRIOS, M. (Swinburne University of Technology)

The area of self perceptions and “the self” has seen wide expansion over the past few years, with increasing interest from clinicians and clinical researchers seeking to understand its role in the aetiology and treatment of psychopathology. More recently, there has been growing interest amongst researchers and clinicians from the cognitive-behavioural field who are interested in using self-related concepts in their understanding of psychopathology. This symposium aims to explore the importance of a range of self-construals in the aetiology and treatment of psychopathology within a cognitive-behavioural framework. We will start with a broad overview of self in psychopathology, where Dr Sunil Bhar will discuss various conceptualisations of the self and the available empirical evidence for their role in psychopathology. The role of specific self-concepts in improving our understanding and treatment of specific psychopathologies will be illustrated in the following three papers. The paper by Ahern and colleagues examines the relationship between intrusions with moral themes and specific self-perceptions (i.e., self-ambivalence and self-worth contingent on moral standards) and discusses the implications for the understanding and treatment of Obsessive-compulsive problems. Moulding and colleagues suggest that self-ambivalence, and control may partially relate to OCD through faulty reasoning processing and inferential confusion. The final paper by Dr Nelson and colleagues proposes that a disturbance in the basic sense of self may represent a marker of psychotic vulnerability.

Self and psychopathology: An introductory overview

BHAR, S. S. (Swinburne University of Technology),
KYRIOS, M. (Swinburne University of Technology)

The relationship between the self-concept and vulnerability to anxiety, depression, and personality disorders has been the focus of much interest in psychological theories. At least two aspects of the self-concept have been nominated as pathogenic: The content of self-concepts (i.e., types of beliefs about the self, the positivity or negativity of these beliefs), and the structure of self-concept (i.e., the coherence of the self-concept, certainty of beliefs about the self, and self-complexity). From a cognitive perspective, critical beliefs about the self are forwarded as constituting pivotal vulnerability factors for depression. Similarly, central to the cognitive model of anxiety disorders is belief that the self is vulnerable. More recently, various beliefs about self have been differentially linked to various personality disorders. Structurally, discrepancies between perceptions of actual and desired self concept have been associated with depression and anxiety. Moreover, failures to integrate positive and negative beliefs about one’s self-concept, and achieve a stable view of self are purported to underlie borderline, obsessive-compulsive and narcissistic personality disorders. This paper reviews the empirical basis of these assertions, discusses the findings and limitations of such research and identifies questions that require further research.

Keywords: *self-concept, anxiety, depression, personality disorders*

The role of self-ambivalence and contingent self-worth in the experience of unwanted intrusive thoughts

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Using a cognitive framework, this study examined self-perceptions as a vulnerability to obsessive-compulsive disorder (OCD). Specifically, Guidano and Liotti’s (1983) model of self-ambivalence and the notion of self-worth contingent upon moral standards were

investigated as possible mechanisms to explain how individuals come to notice their unwanted intrusions. Additionally, this study specifically examined whether intrusions with moral themes related to self-perceptions. All analyses controlled for the influence of depression. The sample comprised 120 first year undergraduate psychology students who were administered a semi-structured interview and self-report questionnaires. Results indicated that ambivalence about meeting personal moral standards was a particular vulnerability to experiencing obsessive-compulsive (OC) phenomena. There was no support for a model of intrusions with moral themes being associated with self-perceptions independent of depression. The importance of depression was highlighted, directions for future research discussed and implications of the findings explored.

Keywords: *obsessive-compulsive disorder, self-ambivalence, self-worth, self-perceptions, depression*

Self-ambivalence, self-efficacy and inferential confusion, and their relationships with OCD symptoms

MOULDING, R. (Swinburne University of Technology), FORGIONE, K. (Swinburne University of Technology), NEDELJKOVIC, M. (Swinburne University of Technology), KYRIOS, M. (Swinburne University of Technology)

The inference based approach to obsessive compulsive disorder (OCD) proposes that in OCD the following sequence occurs. First, the individual perceives the world normally (e.g., “My hands are clean”), but they have a feeling of doubt that leads them to distrust their sense-information (“...but maybe...”). In response, the individual starts to question their sense information, constructing a fictitious story – or narrative – that things might be dangerous (e.g., “...and I know that germs are invisible, so my hands might be contaminated”). As a result of the story, the individual further doubts their initial sense information and acts as if their narrative were instead true (“Therefore, my hands are dirty, so I should wash.”) This faulty reasoning process is known as “inferential confusion”. The narratives the individual constructs in OCD

are said to follow themes regarding the distrust of the self – that the self may be evil or incompetent (Aardema & O’Connor, 2007). Although inferential confusion has been found to be related to OCD, underlying self factors have not been explored. The present study explored whether self-related beliefs (i.e., the self as immoral, the self as incompetent) underlie inferential confusion in a nonclinical sample (112 participants; 91 females) who completed self report questionnaires. Inferential confusion, self ambivalence and anxiety control were significant predictors of obsessive compulsive symptoms, and inferential confusion partially mediated these relationships. These findings suggest that the relationships of self ambivalence and anxiety control operate partially through inferential confusion. It was concluded that inferential confusion in OCD may partly be driven by a feeling that the self is immoral (but could be moral) or that the self is incompetent (but could be competent).

Keywords: *obsessive compulsive disorder, inferential confusion, self-related beliefs*

Anomalous self-experience in the prodromal phase of schizophrenia and other psychotic disorders

NELSON, B. (ORYGEN Youth Health Research Centre), YUNG, A. R. (ORYGEN Youth Health Research Centre)

Over the last fifteen years, there has been increased interest in the early phase of schizophrenia and other psychotic disorders. The focus was initially on the first episode of psychosis but soon reached further back to the pre-onset or prodromal phase. Several strategies have been introduced to identify individuals in the putatively prodromal phase of psychotic disorder. The most widely used of these approaches is the “ultra-high risk” (UHR) approach, which combines known trait and state risk factors for psychotic disorder. Phenomenological research indicates that disturbance of the basic sense of self may be a core phenotypic marker of psychotic vulnerability, particularly of schizophrenia spectrum disorders. Disturbance of basic self-experience involves a disruption of the sense of agency and ownership of experience,

associated with a variety of dissociative symptoms and anomalous cognitive and bodily experiences. In this study, we investigated the presence of basic self-disturbance in a UHR group and whether it predicted onset of psychotic disorder. A total of 41 UHR subjects and 12 first episode psychosis subjects were recruited from Orygen Youth Health, Melbourne. Fifty-two non-clinical control subjects were recruited from the community. Subjects were assessed for basic self-disturbance using the EASE questionnaire. A range of other clinical variables were also measured. Subjects were assessed at baseline and at 12 months follow up. Preliminary data will be presented. Levels of self-disturbance were significantly higher in the UHR sample and the FEP sample compared to the non-clinical control group ($p < .001$). Further follow-up is required to assess the predictive utility of self-disturbance in the UHR sample. Identifying self-disturbance in the UHR population may provide a means of further "closing in" on individuals truly at high risk of psychotic disorder, particularly of schizophrenia spectrum disorders, thus supplementing the UHR identification approach. This would be of practical value by reducing inclusion of "false positive" cases in ultra-high risk samples, and of theoretical value by shedding light on core features of psychotic pathology.

Keywords: *schizophrenia, psychosis, sense of self, self-disturbance*

Sexuality among older people

Chair(s): MCCABE, M. (Deakin University)

This symposium examines factors related to sexual dysfunction (ED) among older men and women. Frequently older people's physical and emotional needs are addressed, but their sexual needs are frequently ignored. Yet sexuality is important in peoples' lives, whatever their age. The first paper in this symposium examines the factors related to sexual expression among older people. This information was used in a workshop context to change participants' attitudes and behaviours when working with older people. The second paper considers the results of a series of studies that examined the relationship between sexual functioning and relationship satisfaction among older men and women. This paper is particularly relevant in informing our understanding of the place of sexual functioning within a broader context. These findings have implications for the treatment of sexual dysfunction using either medical, psychological or combination therapy approaches. The final paper takes this topic further by discussing the implications of the medication of sexual dysfunction, particularly in relation to erectile dysfunction. The role of social, psychological and emotional factors in the development and maintenance of ED are discussed.

Mapping sexual expression and ageing

BARRETT, C. (La Trobe University)

The aim of this study is to understand the context of sexual expression in people aged 65 years and older in order to develop effective responses. The study involved a meta analysis of information in the research evidence; government policies and literature related to sexual expression and ageing. The information was mapped and utilised to develop a storyboarding workshop for aged care service providers to enable them to develop effective responses to behaviour that is labelled as sexually inappropriate or changed sexual behaviour. Educational strategies were also developed to promote healthy sexual

expression. Workshops were piloted, evaluated and disseminated across aged care services in Victoria. The meta analysis revealed a number of factors influencing sexual expression including: societal views of older people; the values and beliefs of service providers and family members; cognitive changes in older people; the education provided to service providers and opportunities for appropriate expression provided to older people. The contextual factors arising from the analysis were mapped and an evidence base relating to each was included in a storyboarding workshop aimed at understanding sexual expression in context. In workshops, participants were invited to explore current stereotypes of older people and beauty and how these impacted on their values and beliefs about ageing and sexual expression. Next, workshop participants were provided with best practice information relating to the experience for older people, the effects of cognitive changes and the legislative requirements. The final component of the workshops involved participants applying this information to an existing situation in their workplace and identifying new management strategies. The process of mapping the context of sexual expression has enabled workshop participants to adopt person-centered responses to sexual expression. Participants report that the workshop provides them with: practical strategies they have not previously considered; permission to talk about sexual expression; and the opportunity to improve the health and wellbeing of older clients.

Keywords: sexual expression, ageing, inappropriate behaviour, aged care services, values

Sexual dysfunction in romantic relationships among older people

DEAKIN UNIVERSITY, McCabe (Deakin University)

This paper considers the factors related to sexual dysfunction among older women, men and couples. The interactive role of biological, psychological, interpersonal and cultural factors in shaping sexual functioning among older men and women are discussed. Two studies will be presented. The first examines aetiological factors related to sexual dysfunction in older women, and the second

examines factors related to erectile dysfunction in older men. The overlap of the various types of sexual dysfunction in women, as well as data related to the causes of the overlap is also considered. Further data are presented on the different types of factors that impact on female sexual dysfunction. In particular, among women, we found a strong association between sexual dysfunction and relationship functioning. This association was not so strong for men. Sexual dysfunction had a negative impact on the interpersonal relationship among older men, as well as men's self-esteem, masculinity and confidence. Male sexual dysfunction was found to impact on their partner's sexual dysfunction and vice versa. The need to consider the relationship in the treatment of sexual dysfunction among older people is central to effective therapy.

Keywords: sexual dysfunction, older people, aetiological factors, erectile dysfunction, self-esteem

Viagra: the little blue pill with big repercussions

BARNETT, Z. (University of Queensland)

Erectile Dysfunction (ED) affects millions of men and their partners worldwide. Therefore, it is reasonable to conclude that the proliferation of research centred on Viagra [Sildenafil Citrate], might also look at the impact it has made on individual lives and on interpersonal relationships. The social and psychological aspects of treatment are clearly absent from the majority of research in this area. Indeed, the advent of Viagra has seen diminishing sexual capacities once linked with normal ageing, now pathologised as sexual dysfunction. This culture of medicalisation of sexual function tends to ignore possible alternative psychological factors that underpin, and co-occur with a problem such as ED. Unfortunately, there is a lack of discussion around expectations, conversations, consensual issues, and partner attitudes in the literature. This paper identifies a number of gaps in the extant literature including the social, psychological and emotional impact that Viagra has had on current sexual relationships and the experiences of older men and women.

Keywords: *erectile dysfunction, Viagra, Interpersonal relationships, medicalisation, ageing*

Shared leadership, diversity climate and managing change at the workplace

Chair(s): HOCH, J. (Michigan State University),
MICHEL, A. (University of Heidelberg)

Discussant(s): PEARCE, C. L. (Claremont Graduate
University)

Change is a constant challenge faced by management. Change comes in the forms of organizing work by sharing leadership and coordinating teams, dealing with different forms of diversity and cultural background, and coping with employees' efforts to resist change. This symposium presents empirical research that examines these important issues that affect change in organizations, and their relation to team performance. The five papers in this symposium report the results of field studies in organizational settings, with an overall N of over 10,000 participants. Implications from the studies presented are discussed with the purpose of helping management deal with these ubiquitous changes related challenges facing companies today. The first paper investigates the impact of diversity climate and non-racist behavior on team cohesion and team effectiveness in the military. In line with anti-discrimination laws the results emphasize that organizations should continue to take actions to minimize racist behaviors and create a climate for diversity. The second study investigates, through longitudinal analysis, how politics and organizational climate influence employees' readiness and resistance to change. The authors find that a negative relationship between perceived politics and readiness for change is moderated by organizational climate. The author of the third paper investigates the impact of shared leadership, in addition to coordination and diversity on team performance, among consultant project teams in a longitudinal study. Results show that coordination and diversity, versus shared leadership (SL), are two different and separate processes yielding performance gains in work teams. The fourth paper examines the impact of global diversity settings and

culture-driven norms on coordination preferences and shared leadership; these include norms for the frequency and timing of communication, autonomy, conflict management. The authors find that teams are better that manage their differences with knowledge about the cultural background. The fifth presentation aims to broaden our understanding of successful implementation of organizational changes. The author shows, using a cross-cultural research design, that the fit between the way leaders and employees exchange relevant information has a positive impact on how change tactics are perceived and influence people's commitment towards change.

What makes a team effective? The importance of diversity climate, non-racist behaviors and team cohesion

MICHEL, A. (University of Heidelberg)

Working in a modern world means successfully integrating employees with diverse demographic backgrounds and competencies in highly performing teams. There is increasing interest in politics, industry and science on employees' perceptions of diversity climate and their impact on employees' behaviors in organizational teams. Previous research on diversity climate has mostly focused on its antecedents (e.g. McKay & Avery, 2006; Mor Barak, Cherin, & Berkman, 1998). In this study we extend existing research by examining consequences of diversity climate for teams in organizations. More precisely, our aim was to investigate which role diversity climate plays with reference to team effectiveness. The following assumptions were tested. First, we assumed that diversity climate is positively related to team cohesion. Second, we postulated that team cohesion in turn correlates positively with team effectiveness. Third, we hypothesized that team cohesion mediates the positive relationship between diversity climate and team effectiveness. Finally, we assumed that the positive relation between diversity climate and team cohesion is pronounced, when racist behaviors within teams are low. Data were collected in 164 military units with a total of 8380 respondents. To test our hypotheses we followed the procedure developed by Preacher and Hayes

(2004) and applied a bootstrapping approach. As assumed, we confirmed the positive relationships between diversity climate and team cohesion and between team cohesion and team effectiveness. Our results further indicate that team cohesion significantly mediates the positive relationship between diversity climate and team effectiveness. In addition, the positive effect of diversity climate on team cohesion is intensified, when racist behaviors in the units are low. Extending prior research our results pronounce the importance of diversity climate in organizations by showing its positive effects on team cohesion and team effectiveness. In addition, aligning with the anti-discrimination laws our results emphasize that organizations should continue to take actions to minimize racist behaviors. To conclude, managers should always bear in mind that high diversity climate and low racist behaviors seem to make a meaningful contribution to team effectiveness.

Keywords: *teams, diversity, climate, cohesion*

Ready or not...? A multilevel study of organizational climate on change recipients' readiness for change

MATSYBORSKA, G. (University of Belgique)

Despite insights into the importance of process factors like change fairness, participatory management and leadership in explaining successful implementation of change projects, there is still some reasonable variance in people's attitudes toward change that needs to be explained. In this inquiry it is advocated that one should also account for the context factors under which change emerges. We are interested in the role of two key work context factors: (1) organizational politics and (2) organizational climate in shaping people's readiness towards change. With reference to work on situational trait relevance, organizational climate is assumed to be a contextual amplifier and/or contextual buffer for the negative effects of organizational politics onto readiness for change. When people perceive the organizational climate as psychologically safe (high on trust in top management, history of change and quality of change communication) they are more likely to engage themselves to support change and

maximize their return. However when faced with a work environment as psychological unsafe, an extra level of uncertainty is added to an already risky situation caused by the highly political environment. This thereby minimizes the likelihood of a suitable return on investment and therefore yields higher resistance toward change. Data were collected in Belgium from 2,543 employees of 84 companies representing a wide variety of industry sectors. In a first survey we collected work context data on politicking and organizational climate. Two weeks after measuring the context we acquired data into people's readiness for change. Consonant with our hypothesis, the relationship between individual perceived politics within an organization and readiness for change in times of change is moderated by the organization's climate. Applying the principles of situational trait relevance to the relationship between politicking and readiness for change suggests that politicking – readiness correlations are stronger in situations providing relevant cues for expressing political behavior. So the strength of the negative correlation between politicking and readiness for change is dependent on the specificity of the situation.

Keywords: *organisational climate, change, readiness*

Is the most effective team leadership shared? The impact of shared leadership, age diversity, and coordination on team performance

HOCH, J. (Michigan State University)

There is increasing research on shared leadership in teams. Shared leadership (SL) describes “a dynamic interactive influence process among individuals in groups for which the objective is to lead one another to the achievement of group or organizational goals or both” (Pearce & Conger, 2003; p. 1). There is evidence that SL enhances team performance (e.g., Ensley, Hmieleski, & Pearce, 2006; Pearce & Sims, 2002). However, there is not much known about how SL relates to, or is distinct from, other processes of motivation and performance gains in teams, such as (age) diversity or coordination of individual expertise. The aim of the present investigation

therefore is to further relate literature on SL, diversity, and coordination, in order to find out and explore more about the successful processes of SL, or motivation and performance gains in teams. In the present paper we examine the impact of SL, moderated by age diversity and coordination, on team performance. Using a field sample of 26 organizational consultant project teams, followers assessed their team's SL and coordination. Six weeks later, supervisors rated their teams' performance. Results indicated that SL predicts team performance and both age diversity and coordination moderate the impact of SL on team performance. SL was positively related to team performance when age diversity and coordination were low, whereas age diversity and team coordination were more strongly related to team performance when SL was low. Particular strong effects of SL on team performance were evident when both age diversity and coordination were low, whereas SL was not related to team performance when both age diversity and coordination were high. We find that coordination and diversity, versus shared leadership (SL), are two different and separate processes yielding performance gains in work teams. Since they are different, they interact in predicting performance. Our research thus extends both the literature on SL as well as literature on diversity in teams. Summarizing, there are multiple ways towards performance gains in teams, and the present investigation further tracks two of them.

Keywords: *shared leadership, diversity, team performance*

Coordination and shared leadership in global teams

KOEHLER, T. (University of Melbourne, Australia)

Global teams (i.e., multicultural, distributed teams) have become increasingly prevalent in organizations. These teams are often fully or partially self-led as direct supervision is rare in a distributed context. To be effective, team members in these teams need to find ways to coordinate their work successfully despite differences in their cultural preferences for teamwork and challenges due to the technology-mediated nature of their

communication. Only limited previous research has looked at cultural differences in coordination preferences and the ways in which team members in self-led global teams manage these differences. One important aspect of traditional self-led teams (i.e., collocated and culturally homogenous teams) are group norms as they provide structure and rules for appropriate behavior (e.g., Feldman, 1984; Ray & Bronstein, 1994). The current study examines how the creation of team norms for coordination can help global teams manage their cultural differences and function in a global distributed context. We gathered data from seven American/Finnish student teams and six American/German student teams during two international classroom collaborations. The current study utilized participant observation to assess cultural differences in coordination and leadership expectations, the development of team norms, and the ways in which the teams used these norms to coordinate and lead themselves. The available data was analyzed using a grounded theory approach. Findings show that culture-driven norms exist for coordination preferences, such as norms for the frequency and timing of communication, norms for autonomy, and norms for conflict management. These coordination norms strongly affected coordination and subsequently team functioning at the outset of the collaborations. Over time, though, the student teams gradually built team norms that allowed the teams to essentially manage themselves. At the end of the collaboration students largely negated the existence of leadership within their teams, describing their teams as leaderless, but guided by strong norms. As students learned about their own and the other team members' cultures, members were able to better manage their differences and more likely to engage in coordination patterns adapted to each other's cultural preferences. Team norms created structure that helped the teams to successfully lead themselves.

Keywords: *coordination, shared leadership, teams*

Fit or not to fit? How cognitive matching between supervisors and change recipients moderates the change implementation – commitment to change relationship.

BOUCKENOOGHE, D. (University of Quebec, Canada)

This inquiry explores employees' reactions toward planned change, and more specifically the role of different change tactics used by managers to create a buy-in into change. Although the literature is replete with studies that explored the effects of different change strategies onto attitude formation, research into this topic is inconclusive about how these tactics affect employees' reactions toward change. In sum, the main purpose of this project is explaining these equivocal results by building further on extant leader-membership-exchange (LMX) research and social information processing theory. It is assumed that the reaction of change recipients is determined by the nature of their relationship with change agents. More specifically this study will focus on the alignment of cognitive styles between both parties. To put it differently, we assume that cognitive fit/misfit in the change agent – change recipient dyad moderates the relationship between the selected change implementation tactics and people's responses toward change. A cross-cultural research design was used that included samples of supervisors and teams who were subject to a recent or ongoing organizational change process (Belgium and Canada). Two surveys were administered to two populations of respondents: (1) supervisors and (2) teams of employees. In an attempt to extend the scope of LMX theory – with its exclusive emphasis on the quality of the affective component in an LMX relationship – we believe the social information processing theory adds some relevant insights into the formation of attitudes toward change by highlighting not only the quality of the affective component in the supervisor – employee relationship, but also by stressing the homogeneity in information processing styles (i.e. cognitive component) between both parties. Basically, this study extends our knowledge into change recipients' attitude formation by demonstrating that cognitive fit between supervisors and change recipients has a positive impact on how change tactics are perceived and influence people's commitment towards change even when these tactics are sanction or legitimization-based.

Keywords: *cognitive matching, change, implementation, relationship, leader-member exchange*

Should I stay or should I go: What keeps employees in the workplace

Chair(s): PALERMO, J. (Deakin University)

A recent survey of 2000 managers by the Australian Institute of Management found that the majority of managers identified skills shortage as having a negative impact on profits, performance and staff morale. Identifying the factors that are most important in shaping employee attitudes toward remaining at an organisation is critical to allow for the design of target interventions which may potentially mitigate the reduction of employee turnover. This symposium aims to inform delegates about the most important predictors of intention to remain. It presents empirical studies that investigate the factors that impact on employees' intentions to remain in their organisational roles across the work life span. The first study explores the experience of graduate nurses and investigates factors that predict their intention to remain in their new roles. The second study examines an IT population, an industry group notorious for high staff turnover. This study in particular focuses on the factors related to trust and perceived support that appear to significantly impact upon intention to remain. The third study investigates factors affecting allied health professionals intention to remain comparing regional versus metropolitan groups for potential differences. The last study in this symposium investigates issues of particular concern for an ageing population by examining the factors that predict workability, that is, one's subjective or objective assessment of ability to work into the future. The symposium will discuss the implications of these findings in the context of boosting the organisations ability to retain talent. Symposium participants will gain an increased understanding of the factors that affect intention to remain and their application in organisational settings, with particular implications for designing organisational development initiatives.

Factors influencing turnover for graduate nurses

WALKER, A. (Deakin University)

The transition from student to qualified nurse is widely recognized as one of the most stressful times during a nurse's career. Previous research reveals absenteeism, intention to quit, and turnover are significant issues affecting the nursing profession in Australia. Turnover is particularly problematic amongst newly qualified nurses, although the reasons for this remain unclear. The present study adopted a social exchange perspective to explore the stressors experienced by graduate nurses (GNs) during their first year of clinical practice and the factors influencing turnover in this population. The study focused on the role of support in influencing important individual and organisational outcomes. Specifically the mediating role of organisational support in the relationship between psychological contract breach and intention to remain was explored. 79 graduate nurses (GNs) in their first year of clinical practice were asked to complete a survey at Time 1 (within 3 months of starting) and at Time 2 (from 9-12 months of starting). The results indicated that support has a positive impact on how GNs manage stress, and their intention to remain employed by the organisation. The findings confirmed the significance of employment relationships in retaining newly qualified nurses, and the importance of maintaining positive exchange relationships with GNs from an employer's perspective. The findings of this study have important implications for the nursing profession and organisations employing newly qualified nurses.

Keywords: *turnover, graduate, stress, absenteeism, intention to quit*

Predicting intention to remain in the organisation: A social exchange perspective

WALKER, A. (Deakin University)

Research has highlighted that the types of relationships that form between employees and their employers can impact employee attitudes and behaviours. Identifying the

factors that are most important in shaping employee attitudes toward remaining at an organisation is critical to allow for the design of target interventions which may potentially mitigate the reduction of employee turnover. The primary aim of this research was to investigate the impact of various social exchange constructs such as perceived support (organisational, supervisor, and co-worker) and psychological contract breach in predicting employee intention to remain with an organisation. A sample of 107 Information Technology employees participated in this study by completing an on-line questionnaire. Results indicated that employees who perceived high levels of organisational and supervisor support, were more likely to remain with the organisation. Alternatively, when employees perceived that the organisation had not fulfilled promised obligations, they were more likely to leave the organisation. It was also found that perceived organisational support fully mediated the relationship between perceived employer breach of obligations and intention to remain with the organisation while supervisor support partially mediated this relationship. The implications of this study suggest the need for more emphasis by employers on issues related to psychological breach and perceived organisational support to ameliorate the adverse affects of staff turnover particularly for workers in Information Technology

Keywords: *employee attitudes, employee turnover, social exchange, supervisor support, information technology*

Factors impacting upon allied health practitioner's intention to leave their employment in metropolitan and regional Victoria.

VON TREUER, K. (Deakin University)

Staff retention is critical to the sustainable delivery of quality health services. Therefore, an understanding of the impact specific workplace factors have on an Allied Health practitioner's (AHP) Intention to Leave (ITL), may greatly inform employee retention strategies. The aim of this study was to concurrently examine many factors that may lead to a person's decision to leave an

organisation. Two metropolitan and 13 regional agencies from Victoria participated in the study. Participants comprised of 202 AHPs representing 15 occupational groups. They were mostly female, worked full time and in acute health settings. Participants were asked to complete an online survey. The survey consisted of demographic questions, the Work Environment Scale (WES), the Psychological Contract Inventory (PCI), Organisational Commitment, Personal wellbeing index (PWI), job satisfaction and ITL. Qualitative data were also collected. The ITL for AHP was found to be 51.3% in smaller regional agencies, in a larger regional setting the ITL was at 19.7%, whereas the two metropolitan sites were 32% and 51.3%. Predictors of ITL were similar between both the regional and metropolitan groups. Job satisfaction contributed to 47.6% and 38.8% of variance in the regional and metropolitan groups respectively. Lack of Psychological Contract fulfillment contributed to 39.3% of variance in the regional group and 25% of variance in the metropolitan group. Organisational commitment (affective subscale) contributed to 22.9% of variance in the regional group and 13.5% of variance in the metropolitan group. Lack of Psychological contract fulfillment also contributed to low levels of job satisfaction. Qualitative data were analysed and were consistent with the inferential analyses, thereby further contributing to understanding these factors impact on ITL. This study found that low job satisfaction and lack of psychological contract fulfillment contributed to higher ITL in the Allied Health sample overall. Furthermore lack of psychological contract fulfillment was strongly associated with low job satisfaction. Qualitative data added some insights into the reasons why and when psychological contract was unfulfilled. These findings point to potential retention strategies.

Keywords: staff retention, health care services, organisational commitment, intention to leave, job satisfaction

Retiring later: Improving the workability of the ageing workforce

PALERMO, J. (Deakin University)

Australia has one of the world's most rapidly ageing workforce populations. Early retirement stands to lose the Australian labour force over 1 million person years of potential working life. Recent government policy reforms have raised the aged-pension age, signaling the need to boost to the number of older workers in employment. Whilst the benefits of increasing the participation of older workers emphasise economic outcomes, the social and health implications of prolonging work life may be overlooked. Without the development of workplace policies and programs that support the wellbeing of older workers, prolonging work life may be achieved at the detriment of the health and wellbeing of employees. The health and social impacts of prolonging work life are yet to be tested. This study aimed to investigate the relationships between workability, intention to remain now and into the future, and psychosocial factors related to worker health and wellbeing. A workability measure (ability to capably fulfill work requirements) was used to predict length of working life. This measure was included in a test battery with other scales that measure occupational stress and related psychosocial and workplace factors. The cross-sectional study involved 305 participants from a general worker population. Surveys were distributed through participants' organisations and completed online. Results showed, as predicted, that workability was a significant and positive predictor of intention to remain into the future, and was mediated by occupational stress. Ability to cope with stress, leadership culture, value congruence and low occupational stress were significant predictors of increased workability. Differences between workability and health were not found between older and younger workers. Studying factors that prolong employment may enable retirement to be delayed in a manner that is sensitive to the context of workers and their health needs. The results of this study suggest that many of the factors that predict workability and therefore intention to remain are in fact modifiable organisational factors. Implications for organisations are in developing strategies for promoting workability of workers across the lifespan, and not just older workers.

Keywords: ageing workforce, workability, stress, well-being, occupational stress

Showcasing new, novel and user friendly scales

Chair(s): KHAWAJA, N. (Queensland University of Technology), GOMEZ, I. (Queensland University of Technology), TURNER, G. (Queensland University of Technology)

Effective, valid and reliable scales are vital for psychological services and research. In spite of hundreds of existing scales, there are still areas that lack adequate and appropriate scales. The objective of the symposium is to showcase four newly developed scales. The scales address salient theoretical and practical gaps in the literature. They possess unique features and were developed using rigorous test development procedures. The first paper presents Multicultural Mental Health Awareness Scale (MMAS). It is the first scale that measures the cultural competency of the Australian mental health professionals. Keeping in view the diversity in the Australian society, the mental health professional requires multicultural counselling skills. The scale measures their multicultural knowledge and skills and self-awareness within the Australian context. The second paper presents a 2-way Social Support Scale. Social support is pivotal in the psychosocial well being of an individual. This is the first time a psychometrically sound scale captures the giving and receiving of the emotional and instrumental support. The third paper highlights the Cerebrovascular Attitudes and Beliefs Scale – Revised (CABS-R). The scale for the first time, measures stroke related health beliefs. Keeping in view the serious nature of the stroke, it is essential to explore a stroke survivor's beliefs and attitudes so that an intervention is planned in an effective manner. Finally, the last paper presents the Disability Standards Questionnaire (DSQ) developed to assist the Endeavour foundation with the evaluation of their program. The scale was developed for the intellectually disabled respondents. It is always a challenge to communicate with the intellectually disabled due to their limited cognitive ability. Therefore, the scale uses a pictorial format to assist the

intellectually disabled individuals in expressing their opinions and need effectively. This unique feature has not been used previously.

Development of a Multicultural Mental Health Awareness Scale

KHAWAJA, N. (Queensland University of Technology)

It is becoming increasingly important for a mental health professional to develop multicultural counselling competencies in order to address mental health issues presented by culturally and linguistically diverse (CALD) individuals in the Australian multicultural society. The present study describes the development of an instrument to assess the multicultural competencies of mental health professionals in Australia. The scale was developed to assess the effectiveness of a multicultural mental health training program. Mental health professionals from Queensland, Australia ($N = 268$) participated in the study by completing a questionnaire battery. Items on the new scale were generated to parallel the Queensland Transcultural Mental Health Centre (QTMHC) training program's objectives. The results describe a 35-item Multicultural Mental Health Awareness Scale. Factor analysis of the scale revealed three factors of multicultural counselling competencies: Awareness, Knowledge, and Skills. These factors were in line with Sue et al.'s (1982) multicultural counselling competencies. The scale has satisfactory internal consistency, test-retest reliability, concurrent validity, and discriminant validity and can be used to evaluate the effectiveness of the multicultural competency training programs in mental health. Keeping in view the need to enhance the mental health professional cultural competency through education, training and practice, the scale is a very positive addition to the literature. It can be used in clinical and research settings to evaluate the professionals' multicultural counselling skills.

Keywords: Multicultural Mental Health Awareness Scale, multicultural, diversity, multicultural counseling training, cultural competence

The development and validation of the 2-way Social Support Scale (2-waySSS)

SHAKESPEARE-FINCH, J. (Queensland University of Technology), OBST, P. (Queensland University)

Social support is an integral variable in psychosocial well-being across a broad array of contexts. For example, giving social support has been found to predict of lower mortality rates whereas receiving emotional support has been related to feelings of self-worth and satisfaction within the work context. The construct is broad and multifaceted however, current instruments tend to focus on a single aspect of support such as the structural notion of source of support or a functional aspect such as emotional versus instrumental support. Most scales have been developed for use in a particular context and hence, results and methods are rarely replicated or are comparable. Currently, there is no psychometrically sound scale that captures the comprehensive shift of measuring giving and receiving emotional and instrumental support. The research draws on a series of studies executed in the development of the 2-way Social Support Scale (2-way SSS). Cross-sectional studies employing students, participants from different work places, and the broader community ($N = 854$) completed surveys that comprised a large item pool of social support questions. In the latter development stages constructs such as life satisfaction and depression were also included to assess predictive validity and the Berlin Social Support Scale (Schwarzer & Shulz, 2000) was included for convergent validity. Horns Parallel Analysis, which was engaged to determine the number of appropriate factors to extract from the Principal Components Analysis and revealed a stable four-factor structure comprising 20 items. Confirmatory analysis with a different sample established the reliability of this structure and regression analyses with varying groups provided further evidence of scale validity. The developed 2-way SSS provides an elegant four-factor measure of both receiving and giving emotional and instrumental support. The scale provides a solid instrument applicable to a variety of contexts that will permit replicability and comparability in future social support research.

Keywords: *social support, psychosocial well-being, emotional support, instrumental support, 2-way Social Support Scale*

A new tool for assessing attitudes and beliefs about exercise in stroke survivors

SULLIVAN, K. (Queensland University)

The aim of this study was to develop a theoretically grounded scale for assessing health beliefs in stroke survivors and assess its psychometric properties. This new scale, the Cerebrovascular Attitudes and Beliefs Scale – Revised (CABS-R) was developed from the Health Beliefs Model. The CABS-R has multiple subscales, each of which corresponds to a known modifiable risk factor, and is comprised of items designed assess beliefs about a range of stroke prevention behaviours. In this study data for two subscales, weight loss and exercise is presented. One hundred and twenty six Brisbane residents aged 50 years and older completed the CABS-R. One month later, 70 participants completed the CABS-R again. Internal consistency, test-retest, and exploratory factor analyses were performed on the exercise and weight loss subscales (minimum $n = 60$ participants). Analyses showed that these CABS-R subscales have moderate-to-good internal consistency and that scores are relatively stable over time. A four factor solution was identified, suggesting the CABS-R validly assesses beliefs about stroke susceptibility and seriousness, and the perceived benefits of, and barriers to, exercise and weight loss for stroke prevention. The CABS-R provides a psychometrically robust tool for researchers and clinicians to assess stroke related health beliefs. To address the significant psychological challenges that stroke survivors report post-event, such beliefs are now being included in novel stroke prevention programs aimed at increasing physical activity and reducing stroke risk.

Keywords: *Health Belief Model, stroke, Cerebrovascular Attitudes and Beliefs Scale*

The Disability Services Questionnaire (DSQ): A self-report questionnaire to measure standards of employment services for individuals with Intellectual Disability

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University of Technology)

The current climate of quality assurance dictates that, in order to receive funding and accreditation, organisations which provide supported employment opportunities for individuals with an intellectual disability must demonstrate their performance against the 12 disability services standards for employment services. Many of the assessment tools that are used with individuals who have an intellectual disability are either designed to be completed by a carer or proxy, or lack psychometric rigor. The aim of this research was to create a psychometrically sound and reliable means of eliciting the feedback of supported employees regarding the performance of their business service. A number of initial pilot phases were conducted to determine appropriate question and response formats, resulting in a pool of 86 simple statements and a pictorial graph response option being chosen. These items were used in a large pilot study in which 571 questionnaires were distributed to supported employees from Endeavour business services drawn from 10 locations across Queensland. Training and development officers assisted the supported employees in completing the questionnaire with the assistance of facilitator and supported employee instruction sheets. Principle components analysis (PCA) was undertaken to determine the most parsimonious factor structure while pragmatic consideration was taken when choosing which items to remove to ensure that the underlying constructs of all 12 standards were measured. PCA with an oblimin rotation resulted in a 35 item questionnaire ($N = 286$). This revealed a four factors solution accounting for 46.02% of the variance. The factors identified were; work environment and conditions, respect and individual needs, knowledge of service processes, and participation. These factors display good internal consistency (Cronbach's alpha range from .68 to .90) and content validity. The results of this research support the notion that it is possible to apply rigorous psychometric principles to test construction with difficult to assess populations.

Consultations with experts in the target population as well as imagination in the test construction arena are valuable tools in designing practical measures that are user friendly.

Keywords: intellectual disability, assessment tools, disability services standards, test development, The Disability Services Questionnaire

Social and emotional concepts in education and learning

Chair(s): MACCANN, C. (University of Sydney)

Discussant(s): ROBERTS, R. (Educational Testing Service)

Educational success can reasonably be considered a globally important goal for most students and most countries. On average, OECD countries spend over 6% of their GDP on education (OECD, 2007), showing the importance that developed countries ascribe to education. Cognitive abilities explain about 25% of the variation in students' grades. However, social and emotional variables can add substantially to this prediction, accounting for aspects of academic performance related to maintaining positive relationships with teachers and peers, the motivation to study, or resilience to the frustration of academic failure or setbacks. This symposium comprises a range of such social and emotional constructs. Each paper describes different scenarios by which socio-emotional constructs might feed into the process academic success. These scenarios include: (a) the role that constructs such as emotional intelligence play in the process of learning cognitive tasks, (b) the translation of personal resources into coping behaviors and adjustment to university, (c) the way that personality may lead to use of problem-focused or avoidant coping that then impacts on students' grades at high school and college, (d) the various influences that positive psychology constructs such as optimism and hope may hold on achievement in high school, and (e) the need to select medical students on the basis of their interpersonal skills as well as cognitive or academic performance. Studies deal with both high school and university populations, highlighting the ways that social and emotional constructs are useful at different educational stages. Key learning objectives of the symposium include: (1) developing an increased awareness of the variety of socio-emotional and noncognitive constructs that may be relevant for academic achievement. These include self-efficacy, coping styles, interpersonal

understanding, emotional intelligence, optimism, and broad models of personality; (2) understanding the processes by which these soft skills and tendencies affect learning and achievement, including the interaction among these socio-emotional tendencies and the limitations of such skills in predicting academic achievement; and (3) developing an awareness of the applications of social and emotional concepts can in educational settings, including selection, development, curriculum design, and policy.

Trait emotional intelligence, subjective state and learning using emotional cues

MATTHEWS, G. (University of Cincinnati),
FELLNER, A. (University of Cincinnati)

It is claimed that emotional intelligence (EI) can be measured as a personality trait using questionnaires. However, little research has validated such 'trait EI' measures against objective behavioral data. Another limitation of existing studies is their predominant focus on perception of emotion, neglecting other aspects of emotion processing. This presentation summarizes two recent studies that attempted to link trait EI to discrimination learning, using facial emotions as cues. The first study compared emotive and neutral features as cues. The second study investigated the role of EI in two-person team performance; EI might especially facilitate team learning. In Study 1, 180 participants were required to categorize animated characters as terrorists or non-terrorists, using a cue that might be either positive or negative emotional expression, or a neutral cue (hat size). In Study 2, 311 participants performed either solo or as part of a two-person team, either in collaboration or competition. In both studies, there were 100 trials; feedback was provided following choice to allow learning. Standard measures of personality, ability and emotional state were obtained. Study 2 also used a situational judgment test (SJT) for EI, and a subjective teamwork scale. Study 1 showed that facial emotion is a more effective cue for learning than the psychophysically matched neutral cue. Study 2 showed that performance was better in the teamwork conditions, relative to solo performance. In both studies, standard

psychometric measures were generally ineffective in predicting performance, as was trait EI. However, the subjective state of task engagement (energy, motivation, and concentration) related to faster learning in both studies. Trait EI showed some capacity to predict subjective state and perceptions of teamwork, even with other personality factors controlled. The findings add to existing results showing that trait EI is at best a weak predictor of performance on tasks requiring processing of emotional information. However, trait EI may relate to subjective experience of performance tasks. The studies also suggest that variation in states is more directly related to emotional processing than are dispositional measures of personality and ability.

Keywords: emotional intelligence, personality traits, emotional processing, subjective states, emotional cues

The relationships between personal resources, proactive coping, personal outcomes and academic success in first year students

BURTON, L. (University of Southern Queensland),
NELSON, L. (University of Southern Queensland)

This research was designed to enhance our understanding of social and emotional variables that influence well-being and success at university. The research was undertaken in two stages. Study 1 examined the relationships between general self-efficacy, proactive attitude, proactive coping, academic achievement and self-reported adjustment. Personal outcomes were operationalised as academic success (e.g., grade point average, GPA) and a self-reported measure of adjustment to university. Study 2 added measures for optimism, instrumental and emotional support seeking, global well-being, affect, and general psychological distress. Specially, the research examined whether proactive coping mediated the relationships between personal resources and outcomes. Participants were convenience samples of students enrolled in first year psychology courses at USQ. Study 1 participants ($N = 188$) were recruited during Semester 2, 2008; Study 2 participants were recruited during Semester 2, 2009 (in progress). In both studies,

participants completed an online survey via the Psychology Department's secure (password protected) website. Study 1 results showed that adjustment was significantly correlated with GPA, general self-efficacy, proactive attitude, and proactive coping, respectively. GPA was significantly correlated with both proactive attitude and self-reported adjustment. Multiple regression analyses showed that adjustment is predicted by proactive attitude, general self-efficacy, and proactive coping. Both general self-efficacy and proactive coping were significant predictors of GPA. Results indicated that proactive coping partially mediated the relationship between internal resources (proactive attitude and general self-efficacy) and self-reported adjustment. Study 2 data is currently under analysis and key findings will be reported at the symposium. Study 1 demonstrated a positive relationship between adjustment, proactive attitude, general self-efficacy, and proactive coping strategies. Additionally, as expected, self-reported adjustment was related to academic success. These findings provide implications for curriculum design and delivery and for transition programs for first-year students. Study 2 findings will provide further insight into the relationships between personal resources, proactive coping, and personal outcomes in commencing university students.

Keywords: social factors, emotional factors, well-being, academic performance, self-efficacy

Students' approaches to coping with stress can impact their academic achievement

NIXON, J. (Australian Council for Educational Research), MACCANN, C. (University of Sydney),
LIPNEVICH, A. (Educational Testing Service)

Coping styles often delineated into: (a) problem-focused coping (PFC), aimed at taking action to change or ameliorate the stressor; (b) emotion-focused coping (EFC), aimed at modifying the negative emotions generated by the stressor; and (c) avoidant coping (AC), aimed at avoiding the stressor altogether. This research addresses whether students' tendency to use these coping strategies relates to their school achievement, and whether such relationships are mediated by personality and

cognitive ability. Over three studies, U.S. students completed self-paced proctored computerised test batteries. Study 1 participants were 375 eighth-graders, study 2 participants were 301 ninth- and tenth-graders and study 3 participants were 1063 university students. Students completed age-appropriate measures of coping tendencies under different frames of reference (e.g., coping with exams, coping with assignments), as well as big five personality, cognitive ability, and life satisfaction measures. Students' also self-reported their grades from the previous semester (parent-reported grades were also obtained in studies 1 and 2). In study 1, PFC correlated positively with grades (.31 to .38) whereas both EFC and AC showed small but consistently negative correlations with grades (-.01 to -.16). Coping explained 6 to 10% of the variation in grades beyond Conscientiousness and ability. In study 2, PFC correlated positively with school grades (.28 to .31), AC negatively (-.19 to -.28), and EFC negatively but trivially (-.09 to -.12). Coping explained 3 to 4% of variation in grades above big five personality and ability. In study 3, AC showed the strongest correlation with grades (-.22 to -.27), though PFC, and EFC also correlated with grades (.13 to .22 for PFC, -.14 to -.16 for EFC). Coping explained 3% of variation in grades above big five personality and ability. Students' approaches to coping with stress impact on their academic achievement, although the effects are partially mediated by personality. Such results suggest that the mechanism by which Conscientiousness and Neuroticism affect school performance is through choice of coping strategies. School-based interventions on dealing with stress might best address problem-focused coping strategies at the secondary level, but avoidant coping strategies at the tertiary level.

Keywords: coping styles, problem-focused coping, emotion-focused coping, avoidant coping, cognitive ability

The role of some strategic noncognitive factors in adolescent academic achievement

NIXON, J. (Australian Council for Educational Research)

In the education sector, attention is currently being given to factors, besides cognitive ability, which impact upon academic performance. The aim of this study is to investigate the potential influence of the noncognitive factors of optimism, friendship perception, hope, and personality traits on the academic achievement of a sample of Australian adolescent students. To examine the impact of this set of strategic factors on academic achievement in an adolescent sample, 140 students from in Years 10 and 11 participated in the study. To measure the dependent variable, academic achievement, students sat the Differential Aptitude Tests (DAT) (Bennett et al., 1984). The Children's Attributional Style Questionnaire (CASQ) (Seligman et al., 1984) was used to measure levels of optimism. The Friendship Qualities Scale (FQS) (Bukowski, Hoza & Boivin, 1993) was used to assess the quality of children's and adolescents' relationships with their best friends. Personality was measured by the Ten Item Brief Personality Inventory (TIPI) (Gosling, Rentfrow, & Swann, 2003) which is a brief ten-item measure of the Big Five personality dimensions. The Children's Hope Scale (CHS) (Snyder et al.1997) was used to measure the noncognitive factor of hope. Analysis using standard multiple regression procedures found that the personality trait of Openness to experience, hope and friendship perceptions were all significantly related to achievement in numerical reasoning. However, Hope did not mediate the relationship between friendship and numerical reasoning. A multivariate analysis of variance revealed that there were gender differences in perceptions of friendship and on verbal reasoning tasks. A moderation analysis showed that gender did not moderate the relationship between friendship perception and academic achievement. These results, in an Australian setting, add to the previous corpus of overseas research on the influence of noncognitive variables on academic achievement. The results reinforce the argument offered in the study that schools and other educational institutions in Australia would benefit their students by incorporating programs and practices that focus on the noncognitive strengths of students, rather than just their cognitive strengths or deficits.

Keywords: *academic performance, optimism, friendship, hope, personality traits*

Keywords: *students, medical courses, admission test, construct validity, interpersonal understanding*

The inclusion of measures of interpersonal understanding in undergraduate medical admissions tests

BRYCE, J. (Australian Council for Educational Research), NIXON, J. (Australian Council for Educational Research)

Currently students wishing to gain admission to medical courses have to sit a multiple-choice selection test, the Undergraduate Medicine and Health Sciences Admission Test (UMAT). This test has three sections, one of which is called 'Understanding People'. The aim of the current research is to investigate the construct validity of this section of the test: whether it is the case that candidates who obtain high scores on the 'Understanding People' section actually have higher levels of interpersonal aptitude than those who obtain low scores on this section. Studies have found that individuals skilled at understanding emotions have a rich 'feelings' vocabulary and also that reading literature teaches individuals to have imaginative insight into the minds of others (Charon, 2000; Ortony, Clore & Collins, 1988). This investigation will therefore also examine the relationship between a test of verbal reasoning and the UMAT 'Understanding people' construct. The participants for this study will be 400 Year 11 students who will be taking UMAT in Year 12. The students will be from diverse schools, which include a range of socio-economic groups and rural/ urban areas in Victoria. Interpersonal aptitude of participants will be measured using the following: Mayer, Salovey, Caruso Emotional Intelligence Test (MSCEIT, 2002), the Emotional Intelligence Questionnaire (EIQ, 1999). Verbal reasoning of participants will be measured using verbal reasoning items from the General Achievement Test (GAT, VCAA 2009). Correlational analyses will be used to investigate the relationships between candidate performance on these measures. At the time of the symposium, interim results will be available as data collection will take place during semester 1, 2010.

Social axioms: Investigating the role of belief systems in social, cultural and clinical psychology

Chair(s): LAM, B. C. P. (Hong Kong Polytechnic University), XIAOHUA CHEN, S. (Hong Kong Polytechnic University)

Discussant(s): LEUNG, K. (Hong Kong Polytechnic University)

Leung and Bond originally proposed the construct of social axioms, i.e., generalized beliefs about how the world functions, to account for cross-cultural variations. Since then, research around the globe has proven that belief systems are also important for understanding a wide range of social behaviors and psychological issues in various domains of psychology, e.g., social, cultural and clinical psychology. In this symposium, we will present our work on the current progress and application of social axioms in psychology research. First, Presenter 1 will examine gender differences in beliefs using cultural-level data. Second, Presenter 2 will construct a model connecting social axioms, personality factors and Hierarchic Self-Interest (HSI), a second order value construct, among international students in Germany. Third, Presenter 3 will disentangle the components of the religiosity factor of social axioms by linking it with other spiritual measures as well as locus of control. Fourth, Presenter 4 will explore the relationships between social axioms, coping styles and moral development dimensions in Italian culture, and suggest emic interpretations of her findings. Fifth, Presenter 5 will present her study examining age differences in social axioms, self-esteem, and life satisfaction among children, adolescents, and young adults, testing a mediation model across these three age groups in Hong Kong. Sixth, Presenter 6 will present a cross-cultural study in Australia and Hong Kong, testing the linkages between social cynicism, body image and self-esteem, which will suggest the usefulness of social axioms in future body image research. Lastly, our Discussant will

discuss the presented papers and suggest some future directions for this line of research.

Men are more cynical than women around the world, but male dominance can elevate women's social cynicism

LEUNG, K. (City University of Hong Kong)

Because of pan-cultural male dominance, women should show more cynicism than men in diverse cultural contexts. This conjecture was evaluated in a global study of social axioms, or general beliefs about the world. Results showed that men were generally more cynical than women. Men's higher concern for competition is likely responsible for their higher cynicism, because compared to women, men generally showed higher reward for application, i.e., the belief in the usefulness of effort and application. The effect of male dominance on women's social cynicism is likely masked by men's competitiveness, because compared to men, women generally showed higher fate control, the general belief that events are generally pre-ordained but alterable. Consistent with the argument that male dominance elevates women's social cynicism, sex differences in social cynicism were smaller in societies where women had lower status.

Keywords: *male dominance, cynicism, competition, social axioms*

Sojourner students: Their personalities, values, and images of the human being in a global perspective

BOEHNKE, K. (Jacobs University)

Most pronouncedly after the fall of the Iron Curtain, one of the marker events of the social change often labeled globalization was that many youngsters from formerly communist countries, but essentially from almost all regions of the globe, have sought tertiary education at universities in Western Europe and North America. At the private Jacobs University Bremen, Bulgarians are the largest non-German group in a student body encompassing individuals from almost 100 nations. The study reported here some 220 students of that university who come from

over 40 different countries. Data on the Big Five (Costa & McCrae), Social Axioms (Leung & Bond), and Hierarchic Self-Interest (HSI; Hagan et al.) were obtained. Analyses of variance were performed after grouping respondents into eight cultural regions in accordance with Inglehart's classification. In a second analytic step a prediction model of HSI (a second-order construct comprising of first-order indicators of individualism, materialism, social comparison orientation, Machiavellism, and acceptance of social inequality, thereby being a measure par excellence of an internalization of capitalist values) is presented. The model explores the role of personality and social axioms as predictors of HSI and focuses on differences between South-East Europeans and students from other parts of the world, utilizing Schwartz's culture-level value measures as a means to decompose culture's impact on individual-level HSI.

Keywords: social change, globalization, social axioms, individualism, social comparison orientation

Facets of religiosity and control in the social axioms scale

SAFDAR, S. (University of Guelph)

Two types of religiosity can be distinguished (Seidlitz, et al., 2002), God-based and spirituality-based. The Spiritual Transcendence Index (STI; Seidlitz et al., 2002), for example, includes Belief in God and Spirituality sub-scales. As the names suggest, these measure a measure of belief in God and a non-theistic spirituality, as well as giving an overall Religiosity score. This distinction is not made specifically in the Social Axioms Scale (SAS; e.g. Leung et al., 2002), a measure of socially endorsed beliefs about how the world, in particular the social world, works, although considerable effort has been expended on validating the SAS cross-culturally. Only one of the SAS items refers specifically to a supreme being, so the question arises as to the type of religiosity assessed in the SAS. Another gloss on religiosity is to see it in terms of powerful external forces. The Locus of Control (LOC) construct has enduring popularity with researchers, in particular Rotter's (1966) original bi-polar (internal vs. external) model.

However, Smith, Trompenaars and Dugan (1995) have argued that Levenson's (1981) tripartite model has greater cross-cultural validity. In Levenson's model, as well as an internal orientation, external determinants are divided into powerful others and luck/fate. An internal orientation is often regarded as the most rational one and powerful others may be divine, so there appears, here, to be an echo of the old anthropological division (Tambiah, 1990) of epistemologies into rationality/science (internal control), magic (luck/fate) and religion (powerful others). A similar division is also apparent in three of the five sub-scales of the Social Axioms Scale: reward for application, fate control, and religiosity. In the present study then, the SAS is examined with the STI and Levenson's LOC scale to consider (1) whether the spirituality dimension of the SAS relates more strongly to the 'God' or the 'spirituality' sub-scale of the STI, and (2) the overlap (if any) between the SAS and LOC.

Keywords: religiosity, God-based religiosity, spirituality-based religiosity, locus of control, social axioms scale

Social axioms in Italian context

COMUNIAN, A. L. (University of Padua)

The aim of this presentation is to examine a) the dimensionality of social axioms in Italian culture, in particular as an emic exemplar of social axioms and b) the relationships between social axioms and coping style and moral development dimensions in Italian culture. The hypotheses suggest that one may raise the question whether the five dimensions representing social axioms are comprehensive. In particular, in Italian culture the Religiosity dimension is influenced by complex emic meanings that we propose to study in this research. We would expect that they should relate to a variety of personal and social behaviours reflecting the Italian cultural and historical legacy in a distinctive way. This research also examines how in the Italian context these axioms may help explain personal and social behavior alone or in conjunction with other psychological constructs. On the whole, it can be concluded that social beliefs seem to offer a valuable new way for researchers to

examine and explore topics empirically and in cross-cultural research.

Keywords: *social axioms, coping style, moral development, religiosity, social behavior*

Social axioms and life satisfaction across three age groups

XIAOHUA CHEN, S. (Hong Kong Polytechnic University)

Social axioms have been identified and validated as useful belief constructs predicting psychological outcomes across cultures. In particular, a negative association has been found between the axiom dimension of social cynicism and life satisfaction concurrently and prospectively, with its relation mediated by self-esteem. Most previous studies on social axioms, however, have been conducted among university students and adult samples. Using a cross-sectional design, the present study seeks to examine the cohort effects of social axioms on life satisfaction across three age groups in Hong Kong: primary school students, secondary school students, and university students. We hypothesized that self-esteem would mediate the effects of social cynicism and reward for application on life satisfaction. Results from multi-group path analyses supported our mediation model across the three age groups. Age differences were found in social cynicism, self-esteem, and life satisfaction, but not reward for application. These findings indicate that developmental influences are significant on the mean levels of cognitive evaluation about the self, the world, and one's life, but that the cognitive process of how self-views and world-views affect one's satisfaction with life is constant across these age groups.

Keywords: *social axioms, belief constructs, cynicism, life satisfaction, self-esteem*

The role of social beliefs in body image research: A cross-cultural examination

LAM, B. C. P. (Hong Kong Polytechnic University)

Personal control beliefs have been extensively studied in body image research, but research on social beliefs is scarce in the literature. In

the current study, we examined how individuals' cynical beliefs about the social world, i.e., social cynicism, predict body esteem and moderate the linkage between body esteem and self-esteem. Two-hundred and five female college students were recruited from Australia and Hong Kong. Our results showed that social cynicism was negatively associated with appearance esteem and weight esteem. On the other hand, social cynicism weakened the impact of weight esteem on self-esteem. In other words, among socially cynical women, weight dissatisfaction does not influence their general self-evaluation due to their skeptical attitudes toward social norms and expectations attached to thinness. Clinical applications of the present findings and future research directions are suggested and discussed.

Keywords: *social beliefs, cynical beliefs, body esteem, social cynicism, body image*

Social norm influence and field experiments

Chair(s): KEIZER, K. (University of Groningen)

In this symposium a number of studies will be presented that all were conducted in a field setting and give insight in workings and possible application of social norm influence. A social norm is the behavior commonly (dis)approved (i.e. injunctive norm) or the behavior common (i.e. the descriptive norm) in a setting. We present research that gives more insight in the processes through which perceived norms influence behavior and the factors that moderate this influence. In this symposium we show how social norm influence on the one hand exacerbates societal problems, and how on the other hand social norm influence can be used as a very effective tool to combat the very same problems. The different studies not only provide insight in the workings of social norm influence, but they also serve as handles for designing effective and powerful interventions. The practical relevance of the presented research and its conclusions is strengthened by the fact that all studies used field experiments to test the different hypothesis. The field experiments showed clear effects of norms on real-life problems in real-life settings.

The cross-norm inhibition effect: How observing litter can lead to stealing

KEIZER, K. (University of Groningen), LINDENBERG, S. (University of Groningen), STEG, L. (University of Groningen)

Prior research has shown that people are more likely to litter in pre-littered settings than in clean settings. We think that this is not only due to people copying the norm violating behavior of other people (in this case littering), but that goal-framing mechanisms are at work as well. Observing that others did not conform to a certain norm weakens people's goal to act appropriately. This process would also inhibit the influence of other norms on behavior in that setting (i.e. a cross-norm inhibition effect).

Based on this assumption, we hypothesise that people who observe that others violated a certain norm in a specific setting are more likely to violate other norms in that setting. We conducted a series of (between subject) field experiments to test our hypothesis. Subjects in the experimental conditions were confronted with a setting that showed that others had violated a certain norm (our context norm, e.g., setting sprayed with graffiti), whereas the subjects in the control condition were confronted with the same setting without these signs of norm violating behavior by others (e.g., setting free of graffiti). In all the experiments, we observed whether or not subjects violated another norm (our target norm) in that setting. For example whether or not they would litter a flyer they had received, or help someone by posting a letter this person lost. In all experiments, we compared the percentage of people violating the target norm between the control and experimental condition. In all the experiments, a (significantly) higher percentage of people violated the target norm (like "do not litter" or "help others") when they observed others had violated the context norm. For example 69% of the people littered a flyer they received in a setting with graffiti compared to 33% when the graffiti was absent. The research reveals that observing that other people violated a certain norm will result in a cross-norm inhibition effect which makes it more likely that people will violate other norms. The cross-norm inhibition effect seems to inhibit all kinds of norms including rules and pro-social norms like helping others.

Keywords: *cross-norm inhibition effect, litter, stealing, norm violating behavior, graffiti*

Using peer influence to promote environmental conservation

GOLDSTEIN, N. (UCLA)

The purpose of these experiments was to demonstrate that peer influence could be used to promote environmental conservation in hotels. Many travelers are asked via signs to reuse their towels at hotels to help save the environment. However, despite the fact that the majority of hotel guests do participate in such programs some time during their stay, we

have never observed a single hotel actually communicate this normative information. We conducted two experiments examining whether conveying this normative information to guests would produce greater towel reuse than messages traditionally used by the hotel industry, which simply focus on the benefits to the environment. Whereas the first study investigates the effects of communicating norms of fellow hotel guests, the second study examines whether informing guests the norms of the previous occupants of their particular room (which we refer to generally as the provincial norm) can make the effect of norms on behaviors even stronger. We created a number of signs urging guests to reuse their towels and randomly assigned them to rooms in a hotel. In Study 1, we compared the effectiveness of a sign conveying that the majority of other hotel guests had participated in the conservation program against the standard environmental appeal used by most hotels. In Study 2, we added a third sign that conveyed that the majority of guests in that particular room participated in the program. Consistent with predictions, in Study 1, we found that communicating the social norm elicited greater towel reuse than simply communicating the benefits of the program to the environment (i.e. the industry standard appeal). In Study 2, we replicated this effect and also found that the sign communicating the norm of the particular room yielded the highest participation rate. The findings of these studies demonstrate the importance of peer influence in promoting environmental conservation. The results of Study 2 in particular suggest when attempting to influence others via peer influence, it is important to ensure that the norms of the reference group are as situationally similar to the intended audience's circumstances or environment as possible.

Keywords: *peer influence, communicating norms, environmental conservation, social norm*

Aligning normative messages to promote water conservation

SCHULTZ, P. W. (California State University),
DICIANNI, W. (California State University),
ESTRADA-HOLLENBECK, M. (California State University)

Prior studies have shown that feedback can be an effective tool in motivating conservation behavior. Our previous research has focused on normative feedback, whereby individuals receive group-level feedback about the behavior of similar others (descriptive norms). While our previous studies have shown that descriptive normative feedback can be an effective tool at promoting conservation behavior, such messages have also been shown to produce boomerang effects. That is, for individuals who consume at a rate that is less than the norm, receiving normative information can produce an increase in consumption. In this talk, we sketch a broad theoretical model describing the psychological processes associated with behavioral feedback. New data is then presented from a field experiment designed to reduce residential water consumption. Participants in the pilot study were 126 households from a southern California coastal community. Of these households, 25 participated in a pilot feedback experiment. These 25 households received real-time feedback about their household-level water consumption, combined with a normative message about the consumption of the other 24 households participating in the study. Feedback was provided continuously for one month. One member from each household also completed a questionnaire measuring self-reported behaviors, attitudes, motivation, and beliefs about water conservation. Statistical analyses showed a 14.4% reduction in water consumption among the 25 treatment households. In addition, results showed a moderation effect, whereby households who were motivated to conserve water prior to the treatment showed a larger effect, compared to households that were less motivated. The talk concludes with a discussion of the implications of these results for large-scale applications, and the importance of developing solid theoretical models that can be used to inform conservation programs and messaging.

Keywords: *conservation behaviour, normative feedback, consumption, attitudes, motivation*

Mediated influences of perceived norms on cooperation in real-life social dilemmas

THØGERSEN, J. (Aarhus University)

It is now broadly accepted that a too narrow conceptualization of perceived norms has led to its importance often being underestimated. However, an additional source or underestimating the impact of norms has received much less attention: a too narrow conception of the processes through which perceived norms influence decision-making (i.e. intention formation) and behavior. This paper reviews theory and research suggesting a number of usually overlooked paths between perceived norms and behavior, which expand the total effects attributable to perceived norms. Based on this evidence, I propose that perceived norms affect behavioral intentions not only directly, but also indirectly, injunctive norms through personal norms and descriptive norms through self-efficacy. In addition, I propose that descriptive norms, at least with regard to cooperating in a social dilemma, influence behavior through the perceived efficacy of cooperation. Reanalysis of meta-analysis data based on field studies, primarily regarding large-scale social dilemmas (pro-environmental behavior) and mediation analysis of survey data. It was found that: a) Injunctive and descriptive norms are positively correlated. Since both can be inferred from the other, this is a two-way influence. Hence, the influence of each of these norm constructs is partly mediated through the other. b) The influence of injunctive norm on BI is partly mediated through personal norms. c) The influence of descriptive norms on BI is partly mediated through perceived efficacy. d) After controlling for BI, descriptive norms have an influence on behavior, which is partly mediated through perceived efficacy. e) Just like perceived efficacy moderate the relationship between BI and B, so do descriptive norms. f) These mediated influences mean that the total effects of perceived norms on BI and B are considerably larger than the direct effects. A too narrow conception of the processes through which perceived norms influence decision-making (i.e., intention formation) and behavior leads to underestimating the importance of perceived norms. This is especially true when the focus is on cooperation in social dilemmas, including pro-environmental behavior. Research in this and other areas has suggested a number of additional paths between perceived norms and

behavior, which expand the total effects of norms.

Keywords: norms, decision making, behavioral intentions, self-efficacy, social dilemmas

Social, cognitive and legal psychological perspectives on counter-terrorism: Innovations in theory and research

Chair(s): GOODMAN-DELAHUNTY, J. (Charles Sturt University)

Discussant(s): GOODMAN-DELAHUNTY, J. (Charles Sturt University)

A multidisciplinary multinational panel demonstrates how findings from social, cognitive and legal psychology are advancing theory and research in defining terrorist acts, assessing causes of terrorism, investigating and preventing terrorism. The symposium presents cutting-edge research on the role of group processes, social identity theory, collective political action, situational crime prevention, non-intrusive inquisitorial interviews and risk assessments used in counter-terrorism. These researchers draw on interviews with terrorists, feedback from CT interviewers, measures of psychological commitment to social groups, social identity analysis, and inter-group conflict. Their research indicates why psychological approaches that focus on individual personality types and psychopathy have limited utility in risk assessment and prevention of terrorism. They illustrate why approaches to counter-terrorism that incorporate accusatorial and coercive interrogative methods increase the likelihood of false confessions or false information about risk of hostility, and how a new proposed Australian definition of terrorism entails problematic concepts of psychological harm and mental illness, and unrealistic expectations of expert assessments of mental states. Together, these innovative approaches to counter-terrorism highlight evidence-based advances at the interface between psychology and the law. These unique contributions of psychology to this emerging forensic field will interest practitioners, researchers and legal policy-makers.

Empirical evidence that support for political violence is associated with the perceived failure of democratic alternative tactics

LOUIS, W. (University of Queensland)

It is often argued that political violence and terrorism arise when democratic, non-violent tactics are perceived as ineffective. Interviews of captured terrorists and the autobiographies of violent leaders support the argument of strategic considerations, and highlight the failure of democratic alternatives as a key stimulus to political violence. However, it is possible that within particular political contexts, both violent and non-violent actors perceive that democratic alternative tactics would fail, in which case strategic beliefs must be seen as rationalizations of violent choices rather than predictors. Until the present research, there has been a gap in the literature, with no empirical data testing the hypothesis that beliefs about the utility of alternative democratic tactics differentiate between activists who support political violence more or less strongly.

Keywords: *terrorism, democratic alternatives, political violence*

Neither mad, bad nor sad: The role of social identity in understanding commitment to terrorist groups

THOMAS, E. F. (Murdoch University)

It is widely accepted amongst scholars of terrorism that terrorists rarely, if ever, exhibit the sorts of psychological abnormalities commonly observed amongst members of other illicit groups (e.g. criminals). Indeed, decades of research has been unable to systematically identify any one clinical feature (mad, bad or sad) that explain the behaviour of people that commit such acts of hostility. In this paper I will put forward a perspective on terrorism as extreme psychological commitment to a social group. Further, I will discuss the ways that terrorism can be understood as a form of collective action, where participants mobilise as a group to try and alter the circumstances of a broader social

group. Putting these two propositions together, I will argue that the social identity approach to collective action has much to bring to an analysis of the radicalisation process. Utilising available interview and scholarly sources, informal qualitative analyses will illustrate the core point that that commitment to terrorist social groups can be understood through the lens of social identity. Understanding the ways that social groups become important, relevant and meaningful to people is arguably at the core of understanding terrorism. The social identity analysis provides one such account and terrorism scholarship can benefit from this large literature in better understanding questions of group processes, leadership, legitimacy and inter-group conflict in the terrorism context.

Keywords: terrorism, psychological abnormalities, social identity, leadership, group processes

Balancing terrorist motivation and capacity in determining and preventing terrorist attacks

MORGAN, F. (Crime Research Centre, University of Western Australia), CLARE, J. (Crime Research Centre, University of Western Australia)

The theory of situational prevention has recently been applied by Clarke and Newman (2006) to the prevention of terrorist attacks. Situational crime prevention has been applied successfully in many contexts and it combines the more fundamental approaches of rational choice and routine activities theory. For example, whatever motivations that terrorists may have, they require the means to overcome physical, practical and geographic barriers to achieving what they want, or equivalently the 'rational' motivational aspects of terrorism are bounded by various practical opportunities that can potentially be altered. In two recent book chapters the presenters re-examined this application of the situational approach and found that it significantly extended the theory as originally applied to crime. This presentation will examine key papers applying situational prevention to terrorism and crime. The presentation will (1) demonstrate the areas in which theory is extended when applied specifically to terrorism rather than broadly to crime; (2) examine evidence for and against

this approach to terrorism, and (3) contrast the theory with other approaches to terrorism by experts in the fields of psychology, political science or law enforcement. The implications of the situational approach for terrorism prevention policy are examined and the balance of strategies that may be best applied are reviewed.

Keywords: terrorism, crime prevention, motivations, terrorism

Improving the diagnostic value of interrogations for intelligence purposes: A positive, scientific approach

MEISSNER, C. A. (University of Texas at El Paso), EVANS, J. E. (University of Texas at El Paso)

Much is known about the problems of coercive interrogative methods and the likelihood of eliciting false confessions or false interrogative information. The current paper describes a positive psychological approach in which we seek to better understand factors that improve the diagnostic value of interrogative information applicable to counter-terrorism. These include non-intrusive ways to determine the intent of interviewees, real-time detection of deception and hostile intent. We discuss a series of studies involving both well-controlled laboratory methods and field assessments of real interrogations that focus on the collection of human intelligence from alleged terrorists. In this context we contrast the use of accusatorial vs. inquisitorial approaches to interrogation and note their implications both for the elicitation of information and assessments of credibility. We describe our attempts to develop other "tools" that might facilitate both training and practice in the interrogation room, including the use of virtual human tutoring systems and a credibility assessment instrument intended to facilitate analysts' evaluations of interrogative information.

Keywords: false confessions, coercive interrogative methods, counter-terrorism, credibility, terrorism

Psychological harm and criminal liability: From assault to terrorism offences

NOLAN, M. A. (Australia National University
School of Law)

Keywords: *terrorism, criminal law, psychological harm, criminal liability, risk assessment*

To present a legal psychological review and theoretical analysis considering the merits of the 2009 proposal by the Australian Federal Government to amend the definition of terrorist act. The proposed reform would return to the controversial 2002 position where pure psychological harm, rather than only actual or threatened physical harm, is part of the definition of terrorist act within the Criminal Code Act 1995 (Cth). However, assessing possible rather than actual psychological harm, would also be one route to creating criminal liability under the proposed reforms. This paper tracks the legal psychological possibility of

gathering and using evidence of actual psychological injury in Anglo-Australian criminal law which allows prosecution of aggravated assaults in the absence of physical injury. The assault law example is then compared to the challenges for the psychological expert, judicial officer or jury under the proposed reforms to the Australian terrorist act definition whereby an assessment could be required of whether the alleged terrorist action causes, or is likely to cause, serious harm including psychological harm. The use of expert psychological testimony to establish that the defendant caused purely psychological harm to a complainant has led to successful prosecution for assault in England. However, the way in which psychological harm has been described by some courts remains problematic. At times, discussion of psychological harm by the courts reflects impoverished understandings of mental illness and of the nature of the expert's possible assessment of the complainant's mental state. The proposed amendment to the Australian terrorist act requires assessment of likely future harm to an unspecified victim, rather than actual harm already suffered by an identifiable victim, and this adds new challenges and controversy in using psychological harm as one way to determine criminal liability. The proposed amendment to the Australian terrorist act definition is of dubious utility and poses many challenges for anyone asked to do the required risk assessment.

Subjective diversity perceptions: The "real" diversity?

Chair(s): ICAPMODE, Meyer (University of Zurich),
SHEMLA, M. (Dresden University of Technology)

Discussant(s): ROßNAGEL, C. (Jacobs University
Bremen)

Diversity has been defined as "differences between individuals on any attribute that may lead to the perception that another person is different from self" (van Knippenberg et al., 2004). Given that, and considering that some studies show that perceived differences mediate the relationship between actual differences and team outcomes (Harrison, 2002), one would expect that studies in this field investigate when individuals perceive differences, how these perceptions are shaped, and what consequences they have on the team. However, most research in this field continues to conceptualize and operationalize diversity in terms of the objective differences between individuals in teams (e.g., tenure, age, values). Therefore, we see great need in advancing research that examines subjective perceived diversity. In this symposium we present new theoretical and empirical insights into what diversity perceptions consist of, how they relate to and interact with objective team diversity, and what influences they have on team processes. In the first contribution, empirical findings reveal that negative effects of objective age diversity on team effectiveness are mediated through subjective age diversity, thus emphasizing the centrality of salience and perception in the diversity phenomenon. The second contribution investigates the sources of subjective diversity perception. It concludes that the interplay between individuals' perception of diversity – which has little connection to actual demographic diversity – is important for performance. Similarly, in the third contribution the authors suggest that actual diversity faultlines are not necessarily noticed by group members and must be perceived in order to have an effect on group processes and outcomes. The authors found that perceived faultlines had an influence on coalition

formation, intensity of conflict, and level of performance. In the last paper, the authors report that an important consequence of perceived diversity in teams is the extent to which team members' affects are likely to be shared. Together, these contributions point to the idea that subjective diversity is a useful and necessary aspect to be considered. The four contributions pose a challenge to the prevalent conceptualization and measurement of team diversity and highlight new approaches for helping diverse teams to reach their full potential.

Age-diversity salience and conflicts in teams as mediators of the impact of objective age diversity on team effectiveness

WEGGE, J. (Dresden University of Technology)

Over the past decade demographic trends have focused increasing organizational attention on issues related to the successful management of an ageing workforce. One aspect that has received rather scant attention in this analysis is the increase in age diversity within work groups. As employees work into late midlife, not only the number of older employees but also age diversity in organizations has increased. Moreover, prior research on group composition indicates that age diversity in teams is not unproblematic (e.g., Joshi & Roh, 2009). The mechanisms underlying potential disadvantages of age diversity in teams such as increased conflict and turnover, however, are not well understood. Therefore, we investigated how negative effects of objective age diversity might develop by examining two potential mediating variables: subjective age-diversity salience in combination with conflicts in teams. In particular subjective age-diversity could explain how negative effects of objective age diversity on team effectiveness (e.g., job satisfaction, team identification, innovation) are elicited. Based on social identity theory, we constructed a new measure of age-diversity salience in teams (that proved to be reliable with an alpha of .82) and tested the mediating role of these subjective diversity perceptions and traditional conflict scales by applying structural equation models to data acquired in a field study with 157 natural work groups of a

major county administration ($N = 722$). The results of our study support the assumption that actual age-diversity in teams yields subjective perceptions of age-diversity that, in turn, lead to emotional and task conflicts. Moreover, both types of conflicts resulted in low team effectiveness in our study. A complete mediation model including these paths showed the best (and very satisfactory) model fit. Thus, objective age differences in groups can be expected to be more salient, triggering emotional and cognitive conflicts, which in turn impair group efficiency. The present studies support the importance of subjective perceptions of age-diversity in teams and encourage interventions to reduce the salience of such differences in combination with interventions seeking to improve successful conflict management in teams.

Keywords: age-diversity salience, conflict, team effectiveness, job satisfaction, innovation

Social category salience moderates the effect of diversity faultlines on information elaboration

MEYER, B. (University of Zurich)

Previous research showed that perceived diversity can mediate the effects of actual diversity on group processes and group performance. However, previous measures of perceived diversity can be criticized for surveying the construct with a limited number of attributes that were selected by the researchers. We argue that such a selection can be arbitrary and that a measure of perceived diversity must take any important salient diversity attributes – also referred to as social categories – into account. We develop such a measure by qualitatively inquiring about salient social categories. The strength of their salience is subsequently rated by the participants. The categorization-elaboration model (CEM) proposes that social categorizations moderate the relationship between group diversity and information elaboration, which is seen as a key determinant of group performance. Therefore, we test whether our measure of category salience moderates the connection between actual group diversity and the elaboration of task-relevant information. 172 participants

were assigned to 43 groups of four. Participant gender, bogus personality feedback, seating position, and colored cards were employed to create two diversity faultline conditions. In the strong faultline condition, groups were split into two homogeneous subgroups with high inter-subgroup dissimilarity on these attributes. In the weak faultline condition, no such split existed. Faultline strength was used as a measure of actual diversity. Groups worked on the Survive in The Desert task. Their interactions were coded with the Discussion Coding System (DCS). Participants stated a myriad of social categories for their salience judgment. These were greatly unrelated to surface-level characteristics frequently employed in diversity research, such as age and gender. Apart from actual age diversity, social category salience was unrelated to measures of actual diversity including personality, motivation, and faultline strength. Social category salience moderated the effect of faultline strength on elaboration: Individuals in strong faultline groups with low levels of category salience elaborated most. Elaboration was positively related to task performance. Individuals report diversity perceptions on categories that are usually not elicited in diversity research. Groups with high levels of actual diversity and low levels of social category salience can benefit from their diversity.

Keywords: perceived diversity, group processes, group performance, attributes, categorization-elaboration model

Perceived demographic faultlines in groups and the effects on conflict, coalition formation and group outcomes

JEHN, K. (Melbourne Business School)

This research examines the effects of group faultline activation on coalition formation, conflict, and group outcomes. We distinguish between dormant faultlines (potential faultlines based on demographic characteristics) and active faultlines (members actually perceive subgroups based on the demographic characteristics) and hypothesize that while dormant faultlines do not automatically turn into active group divisions, a group's entitlement configuration can activate

divisions among group members. We examine the relationship between activated faultlines and conflict, coalition, and group performance. Study 1 was a construct validity study to verify the psychometric properties of the active group faultline measure. The second study provides the cross-validation of our constructs and an empirical test of our theoretical model using 40 student workteams with dormant faultlines based on one demographic characteristic, race. The third study with 32 workteams also tests the hypotheses with dormant faultlines based on two demographic characteristics (race and gender). In our research, we relied on a multi-method approach: pre- and post-experimental questionnaires, contextual ratings by independent raters, content-analyzed audiotapes, observational reports with behavioral indicators, and objective measures of group performance. The groups in all three studies worked on a sequentially interdependent production task. A 2 (dormant vs. no dormant faultline) x 2 (2 entitled configuration vs. no entitled) ANOVA factorial design showed that groups with dormant faultlines and a group personality configuration with two entitled had more active faultlines than without such members. We also found that groups with active faultlines were more likely to form coalitions, have high levels of group conflict, and lower levels of performance. Team identification moderated the effects of activated faultlines on group processes such that a strong workgroup identity decreased the likelihood that activated faultlines led to coalition formation and conflict. This research suggests that objective demographic characteristics that members may align on are not automatically noticed by group members and must be activated to have an effect on group processes and performance.

Keywords: group faultline activation, coalition formation, conflict, group performance, personality

Explaining affective linkages in teams: A multilevel examination of the role of subjective team diversity

SHEMLA, M. (Dresden University of Technology)

To expand on the understanding of how affective states are linked within teams, this study examines the role of team diversity in the process of emotional contagion. Emotional contagion is a phenomenon in which an emotion of one person spreads to others. Previous studies, conducted mainly in the lab, have focused on individual tendencies that influence the intensity of this phenomenon, such as susceptibility to emotional contagion and individualistic and collectivistic dispositions. This study is the first to examine the role of the team in the process of emotional contagion and to do so in the context of natural work teams. Particularly, I propose that affective states linkages in teams are affected by the extent to which the team is diverse, such that affective linkages between team and member is higher in teams with high diversity compared with teams with low diversity. The sample consisted of 341 individuals in 61 natural teams from four different German organizations. Data was collected from two sources and at two points in time, 2 weeks apart from each other. Importantly, team diversity was conceptualized as team members' subjective perceptions of team diversity. Such a conceptualization follows definitions of diversity that emphasize the subjective aspect of the phenomenon, and is in line with the finding that the effects of actual diversity are mediated through perceived diversity. Hierarchical linear modeling revealed that the affective state of the other team members was related to an individual team member's affect. These affective linkages were moderated by subjective team diversity such that the strength of the linkage was stronger for members in teams with high diversity. This research suggests that affective linkages between team members are influenced not only by individual dispositions but also by team characteristics. Particularly, the findings shed light on the active role that subjective team diversity has in shaping team processes.

Keywords: diversity, teams, emotional contagion, collectivistic dispositions, individualistic disposition

Sustainable transportation

Chair(s): STEG, L. (University of Groningen),
NORDLUND, A. (Umeå University)

Car use causes various environmental problems, such as air pollution, excessive use of nonrenewable resources, congestion, and extensive land use. "Business-as-usual" will not lead to sustainable transportation. Promoting environmentally sustainable transportation is therefore important – policy-makers have to work with different instruments, technological experts need to produce eco-innovations within the transport sector, and individual travelers need to reduce private car use and/or switch to more pro-environmental travel modes. Behavior that relates to transportation is, however, complex, both in its variety and in the factors that influence these behaviors, pointing towards the importance of research on sustainable transportation. In this symposium researchers in environmental psychology and traffic and transport psychology will present research addressing a number of urgent questions: How well can private car use be predicted with determinants such as attitudinal factors, personal capabilities, and contextual factors? How well do soft policy measures, targeting reduced private car use, work? And, Are there behaviorally-related problems with introducing new technology within transportation?

When the train comes to town: Important factors in switching from car to train

NORDLUND, A. (Umeå University), WESTIN, K. (Umeå University), OSTMAN, V. (Örnsköldsvik Municipality)

Personal transportation in the future should be constructed in such a way that necessary environmental considerations are taken into account, while the opportunity for mobility and availability for services is held stable or increased. In today's society the majority of person journeys are made by car, a travel mode known for its negative environmental impact but with an excellent record of getting you where you need to be in your everyday

life. If personal transportation in the future is to be sustainable we need alternatives to the car that are perceived to be attractive to the public. When working towards a sustainable transportation infrastructure as well as sustainable personal and professional traveling behaviors, it is important to understand the different factors influencing individual behavior. The current study presents preliminary questionnaire data from an ongoing research project. The project studies factors such as individual values, attitudes, and norms, the social and physical context that individuals inhabit, individuals' personal capabilities, and transportation routines that individual have developed, before and after the opening of a new 190-kilometer railroad on the coast line in the northern part of Sweden, where no railroad had previously existed. The focus will be on how values, beliefs, and norms (VBN Theory, Stern 2000) will predict individuals' intentions or willingness to switch from travelling by car to train once the rail traffic starts. This relationship will be further analyzed within the relevant demographical and geographical context.

Keywords: *transport, sustainability, environmental factors*

The influence of knowledge and values on energy efficient driving

STEG, L. (University of Groningen), GORSIRA, M. (University of Groningen), BOLDERDIJK, J. W. (University of Groningen), KEIZER, K. (University of Groningen)

We studied the extent to which the norm activation model can predict energy efficient driving. We also examined the extent to which values, as well as three types of knowledge (knowledge about (1) the causes and (2) the consequences of global warming, and (3) knowledge about how to drive energy efficiently) predicted the Norm Activation Model (NAM) variables and energy efficient driving. We hypothesised that knowledge and values influence people's awareness of problems resulting from car use, which results in higher outcome efficacy, personal norms, stronger intention to drive energy efficiently, and more energy-efficient driving. We conducted a questionnaire study among 83

inhabitants of the city of Groningen, The Netherlands. As hypothesised, people were more likely to drive in an energy efficient way when they felt a moral obligation to do so. Feelings of moral obligation were stronger when people were aware of the negative (environmental) consequences of car use (awareness of consequences) and when they felt they could help to reduce these problems by driving more energy efficiently (high outcome efficacy). Values explained 35% of the variance in problem awareness. Knowledge about the consequences of global warming explained only 5% of the variance in problem awareness, while the two other types of knowledge were not significantly related to problem awareness. Moreover, we found that knowledge was not significantly related to any of the other NAM variables and energy efficient driving, while values were predictive of personal norms and intentions to drive energy efficiently.

Keywords: norm activation model, energy efficient driving, car use, driving, global warming

Quality of life and social normative information: A study of sustainable transportation behaviour

KORMOS, C. (University of Victoria), GIFFORD, R. (University of Victoria)

This study evaluated the impact of descriptive social normative messages and anticipated changes to quality of life (QoL) on individuals' willingness to reduce their private vehicle use. Previous research has demonstrated the utility of social-norm marketing campaigns for eliciting behaviour change in other domains, but their effectiveness for promoting change to transportation choices remains relatively understudied. An experimental, field-intervention design was employed in which faculty, staff, and students ($N = 81$) at the University of Victoria were asked to attempt to reduce their private vehicle use by 25% for a month. Participants assigned to low or high social norm conditions received messages that either few or many campus commuters had switched to sustainable commuting, whereas those in the control condition did not receive such information. The participants completed daily transport journals. Consistent with

previous studies in other behavioural domains, normative message content caused a short-term change to behaviour: high social norm information increased sustainable transportation behaviour. However, message content did not predict long-term behaviour change; participants in both high and low normative message conditions exhibited a greater decrease in private vehicle use than did those in the control condition. These results also demonstrate that social norm messages are more influential on commuting behaviour than on other types of transportation behaviour. In addition, in line with the existing literature, participants anticipated an overall neutral change to QoL under the hypothetical 25% reduction in private vehicle use: they anticipated decreases to some individually-relevant QoL items but improvements to some collectively-relevant QoL items. Unlike in previous studies, however, the participants also expected improvements to health and money, two individually-relevant qualities. The findings suggest that dissemination of information about positive trends in others' commuting-related transportation decisions may serve to highlight cooperation and thus be useful to promote pro-environmental behavioural change, even when current adoption rates are low. QoL-related findings support the use of a compensatory decision-making model, which has previously been suggested to underlie QoL evaluations (e.g., De Groot & Steg, 2006). Information about specific anticipated QoL impacts may be used by policy-makers to increase acceptance of sustainable transportation measures.

Keywords: quality of life, private vehicle use, transport, sustainable transportation, social norm

Does purchasing an "eco-car" increase the vehicle distance travelled?

FUJII, S. (Kyoto University)

For a sustainable transportation system, zero-/low-emission vehicles (i.e., eco-car) such as an electric or hybrid vehicles would play an important role because of their lesser impact on the environment. However, technology improvement, which contributes to fuel efficiency through reduced energy costs, leads to a reduction in the price for energy services.

Therefore, one might drive much more. For this reason, part of the energy conservation due to technology vanishes. It is plausible to hypothesize that the shift from ordinal gasoline vehicles to eco-cars results in increases in distance driven. This research tested this hypothesis. In this study cars powered by 1.5 litre engines, which currently lead eco-car sales (Prius is the most prevalent in this category of eco-cars) were targeted. Fifty-four respondents who purchased this category of car within 6 months in Japan were obtained using internet survey monitoring data. We conducted two waves of internet surveys to investigate driving distance; wave2 was conducted about 8 months after wave1. Driving distance, as measured by odometer readings, revealed that the driving distance for those who perceived their car to be an eco-car was 1.64 times higher than for those who did not perceive their car as an eco-car about 1 year after purchase. The increase in driving use was particularly prominent for those who presumed that eco-car use could solve environmental problems. The amount that their driving use increased was 104%. These results supported our hypothesis and imply that introducing new technology alone cannot solve environmental problems. The data imply that when eco-cars are promoted, it is important to inform potential purchasers that these vehicles have "low" harmful impact but not "no" harmful impact on the environment and society. Moreover it was also implied that it is necessary to implement some measures that keep people from excessive car use when promoting eco-cars.

Keywords: *sustainable transport, eco-car, environment, driving, energy conservation*

Review of soft policy measures for changed travel behavior in Sweden

FRIMAN, M. (Karlstad University), GÄRLING, T. (Karlstad University)

The aim of this study is to review implementations of soft policy measures. A consistent definition of such policy measures has not yet been developed, a typical feature is, however, that they influence individual choice by means of information and persuasion. Frequently implemented examples

of soft transport policy measures to reduce private car use include workplace travel plans, personalised travel planning, public transport marketing, and travel awareness campaigns. Soft transport policy measures are thus designed to motivate users of private cars to voluntarily change their car use by switching to more sustainable travel modes. A screening process identified 50 projects implemented in Sweden. Eighteen projects were left out due to insufficient documentation. A total of 32 projects were included and analyzed with regard to types of measures used, type of implementation strategies and noted effects on changed travel behavior. The results showed that a weak design is often employed in soft policy projects. A common technique was to give incentives (e.g., free travel pass) to participants. Another technique was information provision. Feedback on travel behavior was documented in three projects. However, several different techniques were often used in the same project. Effect measures after the project ended were scarcely used. Documented effects were an increase in frequency of public transport use (+ 36.11%) and biking (+ 43%) and a decrease (- 21.57%) in frequency of private car use. Other effects analyzed were change in travel per week and change in travel per kilometre.

Keywords: *soft transport policy measures, sustainable travel, public transport, transport, Sweden*

Teacher development in an era of accountability

Chair(s): RILEY, P. (Monash University), HALFORD, W. (University of Queensland)

Discussant(s): BUTLER, R. (Hebrew University of Jerusalem)

Increasing accountability in the education arena of schools should directly impact teachers' motivations and behaviours, yet this has not yet been directly studied in detail. Our topical and timely objectives are to examine implications for teachers' sense of responsibility (paper 1), ethical communication behavior (paper 2), professional development (paper 3), and motivational approach for teaching (paper 4). Individual paper presentations vary along additional key salient dimensions to these four dimensions of teacher development on which the symposium is focused. Cultural settings studied include the U.S., U.K., Germany, Israel, and Australia. Developmental stages span from teacher education students through to experienced teachers. Theoretical perspectives draw from both motivation theories and sociocultural perspectives. Data sources are from surveys, mixed-methods, and longitudinal designs. Collective contributions across the set of papers show that pressure to ensure high student performance can undermine rather than support both teacher professional development, and the quality of teachers' support for student learning; that accountability and reward systems which are discrepant with teachers' own sense of professional responsibility are unlikely to engender benefits; and, that recent changes in the communication landscape raise issues of "professional cyber-safety" which pose risks to the fitness to practice of teachers who undertake emotional work involving high levels of interpersonal contact with youth. In view of the findings, implications are offered with regard to how accountability systems could better be improved. Following individual paper presentations, and audience questions specific to each paper, our Discussant will make her presentation and invite audience rejoinders. Our Discussant is a distinguished research professor

in the field of motivation, who has made seminal contributions in the areas of both student and teacher motivation, and whose present ongoing program of research concerning the relevance of teachers' motivations to their own behaviours and students' outcomes, is highly germane to the symposium proposal. She will make individual comment and critique on each presentation, before integrating across overarching themes and deriving main implications and fruitful directions for future research endeavours in this area. The session will end with audience questions and discussion around the issues raised.

Teacher responsibility in an era of accountability

KARABENICK, S. (University of Michigan), LAUERMANN, F. (University of Michigan)

There has rarely been a greater focus in the U.S. on the accountability of teachers for student achievement. Although accountability takes center stage, it is closely aligned and often used interchangeably with responsibility. They are not synonymous, however; teachers may feel responsible for some aspects of student learning even if not accountable, and while accountability systems require monitoring and control for compliance, the actions of those who feel responsible may be self-determined rather than extrinsically motivated by the consequences imposed by those systems. Our presentation will: (a) unpack the concept of teacher responsibility into its multiple components, (b) report the results of empirical studies of teachers' beliefs about responsibility, and (c) discuss implications for accountability systems. A qualitative study was conducted with teachers ($n = 25$) in the U.S. and two quantitative studies using a newly-developed responsibility scale with teachers in Germany ($n = 200$), and Israel ($n = 250$). We will present results of empirical studies that support a six-component model according to which teachers' responsibility beliefs can be categorized, as well as linkages between responsibility and related constructs. The presentation will emphasize the inherent complexity of teacher responsibility as an overarching concept that incorporates aspects of intrinsic motivation,

locus of control, organizational citizenship, and collective responsibility – constructs that are powerful predictors of student academic success. The results indicate that teacher responsibility includes not only formal duties but also organizational citizenship (e.g., that a responsible teacher “comes early, stays late and is never totally done with work”). Moreover, some teachers extended their responsibilities well beyond the context of school to such roles as feeding students and finding them homes. The results suggest that the implementation of accountability systems in combination with reward systems interact with teachers’ personal sense of responsibility on multiple levels. If the criteria that determine teachers’ sense of professional responsibility are not consistent with the criteria according to which they are judged accountable, an environment of accountability is unlikely to nurture responsibility. A deeper understanding of the criteria and determinants of teacher responsibility, therefore, has important implications for teacher motivation.

Keywords: accountability, students, responsibility, motivation, teachers

Usage of social networking sites among prospective teachers – ethical implications for “fitness to practice”

MORRIS, Z. J. (Monash University)

The concept of “cyber-safety” in relation to children and adolescents and bullying behaviours has been well publicised, but to date, too little attention has been given to “professional cyber-safety”. Teachers who utilise Social Networking Sites such as Facebook and MySpace place their personal identity in the same digital environment as their students, and this may potentially pose a threat to their professionalism, by eroding personal and professional boundaries. Due to the rapid expansion of technology, clear legal and ethical guidelines are not yet defined, opening up the possibility for developing professionals, who have been immersed in such technology for many of their formative years, to find themselves exposed to charges that they are not “fit to practice”. Teacher education students ($N=150$) enrolled in their final years of secondary teacher education

degrees completed a survey detailing their current and prospective use of Social Networking Sites. 89% of participants actively used Social Networking Sites; only 9% indicated that they would definitely delete this profile when they began teaching, and less than half (47%) indicated that they would change their privacy settings when they began teaching. 3% of participants indicated that they would accept a “friend request” from a current student, a further 12% indicated that they might accept such a request. Further, 33% of participants indicated that they would accept a “friend request” from previous students who had finished Year 12. Possible underlying motivations for Social Networking Behaviour are discussed in relation to established extant theories of personality and adult attachment. The results suggest that pre-service teachers generally intend to continue to present their personal identity through Social Networking Sites once they assume the role of a teacher. Failing to alter privacy settings to limit public access to their profiles, or adding students as “friends”, may expose early career professionals to new ethical issues involving “dual relationships” and possible blurring of boundaries between their clients and themselves as professionals; calling into question their fitness to practice. The personal information disclosed through Social Networking Sites may influence the appraisal of whether or not the individual demonstrates fitness to practice, or is found to be unfit as a result of prior behaviour made accessible through Social Networking Sites, that is unbecoming to the profession.

Keywords: professional cyber-safety, teachers, social networking sites, fit to practice, professional boundaries

Teachers’ professional development under reform pressure

OPFER, D. (Cambridge University)

Teacher professional development (PD) has become a major focus of school accountability initiatives because of the belief that the success of the efforts hinge, in large part, on the effectiveness of teachers. Recent research provides some preliminary guidance about the characteristics of ‘effective professional

development': that it is ongoing, collaborative, practice-based, and uses active learning pedagogy. This evidence suggests that professional development experiences that share all or most of the characteristics can have a positive influence on teachers' classroom practices and student achievement. This paper explores both teacher and school level conditions that make 'effective professional development' more or less likely to occur. It pays particular attention to those schools at the bottom of league tables and under the most pressure to improve. A national, random sample of teachers in primary and secondary schools in England was surveyed about their professional development practices and the conditions which influenced their professional development and teaching practice. Teacher surveys were received from 329 primary schools - a response rate of 36%, and 59 secondary schools - a response rate of 56% of the schools selected for participation. SEM was used to identify individual and school conditions associated with 'effective PD'. Teachers in schools at the bottom of league tables are the least likely of responding teachers to participate in 'effective professional development'. Three factors are associated with a lack of effective PD for these teachers: 1) an individual belief in teaching practice and teaching success as static; 2) the lack of a collective learning orientation in the school; and, 3) PD participation that is determined and required as a function of performance management. Accountability pressure is not resulting in more effective professional development. The evidence from this study in England indicates that accountability pressure creates an external locus of control for teacher learning. If teacher professional development is to achieve its promise for improving teacher practice, 'required' PD should be limited and more attention paid to changing individual and collective beliefs about professional development, which play a significant role in determining the types of learning in which teachers participate.

Keywords: teachers, professional development, school accountability, effectiveness, student achievement

Performance pressure: Implications for teachers' motivational approach for teaching

SHIBAZ, L. (Hebrew University of Jerusalem)

Recent reforms emphasize student performance, assessed typically using standardized tests, to measure teacher and school accountability. Although intended to improve educational outcomes, largely through increasing teacher motivation, these reforms have been criticized for potentially negative implications for the quality of teaching, learning, teacher-student relationships, and school and teacher commitment to struggling students (see Hursh, 2005; Ryan & Brown, 2005 for reviews). Extrapolating from our recent achievement goal approach to teacher motivation (e.g. Butler & Shibaz, 2008), our main objective was to examine the proposal that pressure to ensure high student performance influences the quality of teaching, specifically teacher support for student learning, at least partly by influencing the quality of teachers' motivation. No previous studies have examined the implications of such performance pressure (PP) for teachers' own motivation. Moreover, existing inventories have not conceptualized PP as a distinct school climate dimension. 300 elementary school teachers in Israel completed measures of goal orientations for teaching and school climate; the latter including four new items to assess PP. Six months later, teachers completed a measure of their support for student questioning and help-seeking. Results confirmed responses to PP items loaded on a separate factor, distinct from school climate dimensions of perceived principal support and excessive work demands. Scale reliability was acceptable. As hypothesized, PP emerged as the strongest organizational climate predictor of teachers' performance goals for teaching; associated with both strivings to demonstrate higher ability than other teachers (performance-approach) and to avoid the demonstration of inferior teaching ability (performance-avoidance). Perhaps most important, performance approach orientation for teaching mediated the negative consequences of performance pressure on teachers' support for student questioning and help seeking in

classroom. These results are important. On the one hand, they confirmed conceptualization of PP as a dimension of school climate and showed that PP does enhance concerns to prove high teaching ability, as advocates of accountability assume. On the other hand, performance goals have been shown to be negatively associated with teacher wellbeing. Our results demonstrate further how increasing motivation of this kind undermines, rather than supports, the quality of teachers' support for students and learning.

Keywords: student performance, accountability, goal orientation, teacher motivation, performance pressure

Teacher identity development

Chair(s): RICHARDSON, P. (Monash University)

Discussant(s): HORENCZYK, G. (Hebrew University of Jerusalem)

A large and burgeoning body of research is focused on teachers' general career motivations. Our symposium takes a step further to consider larger aspects of teacher identity and their relationship to teacher development in specific domains. The perspectives included are those of personality theory (paper 1), subject-specific teaching motivations (paper 2), teaching motivations in relation to attitudes toward student diversity (paper 3), and in relation to burnout and career plans (paper 4). Theoretical perspectives include personality, goal, and expectancy-value theories; methodologies encompass intensive and open-ended data collection, through to large-scale and longitudinal studies; the developmental spectrum spans teacher education students through to experienced teachers; and contexts examined include the United States, Australia and Turkey. Collectively, these papers provide multiple perspectives on teacher identity and development, demonstrating the relevance of personality dimensions to teachers' career choice, planned effort and commitment (paper 1); the relevance of teaching career motivations identified in developed countries to commencing biology teachers in Turkey (paper 2); the impact of teaching goals on attitudes and practices towards minority and poor students (paper 3); and the relative contributions of selected personal and environmental variables to teacher burnout symptoms and planned persistence in the profession (paper 4). The Symposium is timely in the current climate of teacher shortage, and makes a useful contribution in developing theoretically grounded approaches. Following a brief introduction by the Symposium Chair, each presenter will summarise the objectives, methods, data sources and conclusions from her/his research, allowing for brief question and comment time at the conclusion of each presentation. The Discussant is a well-known researcher whose work is in the

direct areas of the research presentations of this proposal, who will draw together and highlight key findings, themes, and productive future research directions.

Teachers: from factors to facets

QUIN, K. (Monash University)

Researchers investigating elements of personality influencing career choice have used the Five-Factor theory of personality with limited success, perhaps from reliance on its broad factors rather than on specific facets within those factors. It has been suggested (Hurtz & Donovan, 2000) that more specific facets might yield stronger results. The first aim of this study was to identify whether specific facets of personality measures might reveal more information about personality traits of beginning teachers. A longitudinal study of the teaching commitment of beginning teachers (Watt & Richardson, 2007) found that individuals high on intrinsic and altruistic motivations for initially choosing teaching were also those who planned to persist longest. A second aim of this study was to see if there was a relationship between personality facets and teaching commitment factors. Practising teachers with up to three years' experience were interviewed to identify personality traits they thought important for teachers. Responses were compared to the Adjective Check List Correlates of the NEO PI-R Facet Scales (Costa & McCrae, 1992). A cohort of 74 volunteer trainee secondary teachers in their third year of a four-year course completed new personality questionnaires designed to identify influential personality facets. Correlations between personality facets and teaching commitment factors were examined. Specific facets rather than broad personality factors were more successful in identifying personality traits possessed by trainee teachers. Prospective teachers scored high on: competence, dutifulness, achievement-striving, self-discipline (facets of the Conscientiousness factor); warmth, gregariousness, positive emotions (facets of the Extraversion factor); straightforwardness, altruism, compliance, tender-mindedness (facets of the Agreeableness factor). Scores were low on: modesty (facet of the

Agreeableness factor); anxiety, angry hostility, and depression (facets of the Neuroticism factor). High scoring facets also correlated with teaching commitment factors of planned effort and planned persistence. Higher Deliberation and lower Impulsiveness facets also correlated with planned effort; and facets of Feelings and Trust correlated with planned persistence. Measures of personality facets could be useful in providing guidance to prospective teachers and employers. Reasons for the greater apparent sensitivity of personality facet measures over factor measures are discussed. Results also suggest a link between motivation and personality theories.

Keywords: personality, big five model of personality, broad factors, specific factors, teaching

Why do Turkish students choose teaching biology as a career? A perspective from a developing country

KILINC, A. (Ahi Evran University)

The shortage of teachers, career changers, the ageing teacher force and problems in attracting well-qualified people to teaching are the main current challenges to the teaching career. As a consequence, policymakers and teacher recruiters around the world strive to understand how to attract individuals to this profession. However, research regarding the attractors into teaching has been conducted almost entirely in developed countries and has not focused on particular subject areas to be taught. In addition, only limited lists of attractors have been used. Accordingly, the main purpose of this presentation is to examine what attractors influence people who choose teaching biology as a career, and what aspects of Turkish culture lead people to make this career choice. The questionnaire used in this study included open-ended questions about the backgrounds of the participants, and attractors were used to determine the student teachers' ideas about their career decisions. The sample consisted of 37 freshman biology student teachers (31 female, 6 male). The results showed that the enjoyment of working with young people, enjoyment of biology, and perceived light workload were attractors that were most commonly reported by student

biology teachers. Even though student teachers in the present study were aware that they had little chance of recruitment to teaching positions due to the competitive job market in Turkey, they listed these as top reasons, making them strong attractors. On the other hand, the Turkish sociocultural structure also affected student teachers in different ways. For example, relative to their counterparts in Western countries, participants mostly expressed that they behaved according to their parents' directions while making a career decision. This situation may stem from the fact that Turkish people are more externally controlled, perhaps because of an underlying cultural characteristic such as collectivism. Consequently, recruitment units around the world should take into account not only the attractors related to the subject area to be taught, but also the sociocultural characteristics within which teachers are situated.

Keywords: *attractors, biology teaching, Turkish culture, career choice, cultural characteristics*

A longitudinal study of pre-service teachers' attitudes toward diversity, their motivational beliefs, and proposed instructional practices

KUMAR, R. (University of Toledo)

This four-year, eight-wave sequential design study draws on achievement goal theory and multicultural education to examine the relationship between change in pre-service teachers' endorsement of mastery-focused and performance-focused instructional strategies (MF-IS & PF-IS) and three time-varying covariates: pre-service teachers' personal achievement goals, beliefs regarding minority and poor students, and comfort with student diversity. Research emerging from a goal theory perspective strongly supports the beneficial influence of MF-IS on positive academic and psychological outcomes for students, as opposed to the detrimental effects of PF-IS. To date, there is no research from this theoretical perspective that has examined whether teachers' attitudes toward student diversity relate to the kind of instructional strategies they are likely to adopt. This paper seeks to address this issue. The sample

included students in the first-year Orientation seminar, the Principles of Democratic Education course halfway through the program, and final-year student-teaching seminar. Hierarchical Linear Growth Curve Modeling will be conducted for the final paper. Results presented here are based on stepwise regression analysis with the first 4 waves of data ($N_{OS}= 243$, $N_{PDE}= 525$, $N_{STS}= 380$). Holding mastery-approach goals was significantly predictive of endorsing MF-IS ($\beta=.31$). Pre-service teachers who were less mastery-approach focused ($\beta=-.10$) and more performance-approach focused ($\beta=-.07$) were significantly more likely to endorse PF-IS. Personal performance-avoid goals were negatively associated ($\beta=-.07$) and mastery-avoid goals were positively associated ($\beta=.09$) with PF-IS. Pre-service teachers who held stereotypic beliefs about minority students and were uncomfortable with diversity were significantly less likely to endorse MF-IS ($\beta_{\text{stereotypic beliefs, MF-IS}}= -.13$; $\beta_{\text{discomfort with diversity, MF-IS}}= -.12$) and more likely to endorse PF-IS ($\beta_{\text{stereotypic beliefs, PF-IS}}= -.14$; $\beta_{\text{discomfort with diversity, PF-IS}}= -.21$). Controlling for pre-service teachers' demographic background and years in college, the predictors explained 25.6% and 25.4% of variance in MF-IS and PF-IS, respectively. The study provides empirical evidence, based on insights offered by achievement goal theory, for the relation between pre-service teachers' personal goals and instructional strategies they endorse. Pre-service teachers who are encapsulated in their stereotypic beliefs, and experience difficulty interacting with students they perceive as different from them, cannot serve their students well.

Keywords: *achievement goal theory, multicultural education, mastery-focused instructional strategies, performance-focused instructional strategies, attitudes*

Personal and environmental variables that predict burnout and persistence among early career teachers

DE ALWIS, N. (Monash University), WATT, H. (Monash University), RICHARDSON, P. (Monash University)

Since the start of this decade a shortage of suitably qualified teachers has existed in

Australia and elsewhere. With an ageing teacher workforce nearing retirement, the lack of teachers in the profession is expected to increase. Worsening the shortage, many early career teachers exit the workforce within three to five years of entry. As a result, there is a need to identify factors that affect early career teacher attrition, in order to better support and sustain them in the profession. The concept of burnout, which is a state of physical and emotional weakening brought on by the conditions in the workplace, has been linked to premature attrition of teachers (Freudenberger, 1974). Since it has been argued that when studying the concept of burnout both personal and environmental factors needs to be taken into consideration, this study attempts to identify such factors that affect burnout as well as planned persistence. Data were collected as a part of a longitudinal project looking at attitudes and motivations of teachers. The Factors Influencing Teaching Choice (FIT-Choice; Richardson & Watt, 2006) project collected data from participants initially enrolled in secondary, primary/elementary, and early childhood teacher education in 2002/3 at three Australian universities ($N=291$), at each of three timepoints: beginning of teacher education (P1), end of teacher education (P2), and 1-5 years following professional entry (P3). For this study selected data from P2 and P3 were included. Path analyses showed declining self-efficacy, low school resources, high work demand, and stress all predicted teacher burnout and planned persistence. Burnout dimensions and planned persistence were also interrelated. By investigating which personal and environmental variables predispose teachers to burnout and attrition, administrators and schools can identify teachers most at risk, and act to support them. Environmental stressors can be modified (e.g. more resources and less demand) in order to prevent burnout and aid teachers to continue in the profession. Personal resources will also need to be bolstered through assisting teachers' coping and affirming their skills to foster self-efficacy. Such actions should not only benefit teachers but also flow onto their students.

Keywords: planned persistence, teacher attrition, burnout, personal factors, environmental factors

Teacher motivations: Extending the big theories

Chair(s): KILINC, A. (Ahi Evran University)

Discussant(s): ECCLES, J. (University of Michigan)

We present new empirical research on teaching motivations from diverse motivational perspectives. Collectively, we draw on expectancy-value, adult attachment, possible selves and goal theories; to illuminate career choice among teachers, ideal and feared teacher selves, and achievement goals in teaching. Studies vary in developmental stage (pre-service vs. practicing teachers); cultural setting (Australia, US, Norway, Germany, Israel; research methods (quantitative and qualitative) and theoretical perspectives. We contend motivational theories have insufficiently informed research regarding teaching motivations. We extrapolate from well-established motivation theories to ask, what kinds of values and expectancies, possible selves and goals are relevant for teachers; whether and how we can measure them; whether and how they matter, for teachers, students, and schools. Transposing theoretical concepts required the development of theories which were originally developed to apply to students, not to teachers. A range of sophisticated methodological approaches examine robust empirical data from different cultural settings. Collectively, the four studies offer three powerful theoretical contributions. First, we show how established motivational theories can be fruitfully applied to exploring how individuals approach the complexities of teaching. Second, whether teacher motivations matter both for their own plans, wellbeing, and behaviours, and for the quality of their instruction and students' engagement in learning. Third, teacher motivations are influential from the outset of their entry to teacher education and continue to play out across their teaching careers. The Symposium is timely and makes a useful contribution in developing theoretically grounded and psychometrically strong approaches to examining teaching motivations.

Following a brief introduction by the Symposium Chair, each presenter will summarise the objectives, methods, data sources and conclusions from her/his research, allowing for brief question and comment time after each. This will leave approximately 20 minutes for the distinguished Symposium Discussant to make specific comment on each paper, draw contributions of individual papers together, elucidate and critically comment on common themes, and invite audience rejoinders. Her own research expertise and perspectives regarding motivations, and self and identity processes will bring an especially valuable dimension to this discussion.

An expectancy-value approach to the study of teacher motivations

WATT, H. (Monash University)

The Eccles et al. Expectancy-Value (EV) model (1983) conceptualises classes of motives, which I apply to the question – what motivates people to choose teaching? Within EV, expectancies and task values are major influences on choices. Developed to explain gendered high-school mathematics enrolments, it has since been applied to other domains, including mathematics-related career choices. Research concerning teachers has not typically drawn upon the extant motivation literature, tending to examine variously operationalised motives, not integrated within a solid theoretical framework. A comprehensive review highlighted intrinsic, extrinsic and altruistic motivations as most important (Brookhart & Freeman 1991). However, definitional imprecision and overlapping categorisations are evident from one study to another; e.g., desire to work with children as sometimes intrinsic vs. altruistic. EV provides a comprehensive framework into which previously identified motives can be incorporated; it also suggests additional motivations including expectancies. Previously identified motives fit under EV values, further divided into intrinsic, utility, attainment, and cost values. Robust measures were developed and the resultant scale psychometrically validated across two cohorts of Australian preservice teachers ($N_s=488,652$; Watt & Richardson, 2007). The FIT-Choice scale has

subsequently been used in other cultural settings, including the US ($N=511$), Germany ($N=210$), and Norway ($N=131$). It is not obvious what kinds of expectancies and values we should expect to be most salient, whether results would reflect or challenge prevailing stereotypes, and by extension the kind of people who become teachers. Current stereotypes include the choice of teaching as a family-flexible career, high altruistic motivations and teaching as a “fallback” career. Consistent with EV, expectancies and values were highly rated across settings. Among the values subclasses, altruistic and intrinsic were rated high, and extrinsic (e.g., teaching providing time for family) only moderately. Fallback career was rated low. Teaching motivations further predicted professional engagement dimensions. Intrinsic and altruistic motivations showed positive correlations, while extrinsic-type motivations showed negative correlations. For cost, perceiving teaching as highly expert positively predicted engagement; suggesting people are attracted to teaching as cognitively stimulating (Richardson & Watt, 2006). In conclusion, EV provides a comprehensive theoretical framework within which teacher motivations can be soundly measured.

Keywords: *expectancy value theory, motivations, altruism, culture, teaching*

Adult attachment theory: classroom relationships as corrective emotional experiences – an unconscious motivator to teach?

RILEY, P. (Monash University)

Studies in conscious, and therefore articulated, motivation to teach have gained considerable attraction, while unconscious motivation has been largely overlooked or ignored. While there are obvious methodological difficulties associated with unconscious motivation, the lack of research in the area is surprising for two reasons. The first is that interest in the area began in the late 1950s with some promising studies and theoretical work (see for example, Stern, Masling, Denton, Henderson, & Levin, 1960; Stern & Masling, 1958; Wright & Sherman, 1963). The second, and perhaps more important, reason is that significant

numbers of early career exits suggest that some key developmental issues facing new teachers are probably not being adequately identified and addressed with current research protocols. Adult attachment theory, which extended the use and development of attachment theory, has been proposed as a useful paradigm through which to examine teachers' unconscious motivation (Riley, 2009). The theory predicts that that an individual's relational history contributes unconscious motivation to join the profession, along with resilience factors and vulnerabilities, potentially leading to either positive classroom experiences or early exits. To examine this proposition data were collected from pre-service and experienced teachers in two mixed-method studies. The first ($N=308$) employed the Experience in Close Relationships Questionnaire (ECR) and the second ($N=73$) a revised form (ECR-R). Both studies collected demographic and open-ended data on attractors to teaching. Analysis of the questionnaires revealed high incidence of insecure attachment, suggesting many teachers may enter the profession unconsciously seeking corrective emotional experiences through student interactions. Qualitative analysis revealed that 46.2% of respondents based judgments of personal success or failure as teachers on whether they make a difference in students' lives. Further, the desire to make a difference was undefined in all cases, but correlated with feelings of anger toward students who "did not [or would not] play by the [teacher's] rules". These results are open to multiple interpretations, but appear to support the hypotheses, suggesting that the importance of unconscious motivation is at least as powerful a predictor of teacher success as conscious motivation, which challenges current teacher education and support practices.

Keywords: adult attachment theory, conscious motivations, unconscious motivation, resilience, vulnerabilities

What does possible selves theory have to offer the study of teacher motivations?

RICHARDSON, P. (Monash University)

Do beginning teachers have a sense of the type of teacher they most want, and most do not want to be? Do these "possible selves" (Markus & Nurius, 1986) relate to demographic, school contextual, internal resources, and have behavioural and affective teaching-related outcomes? 253 Australian beginning teachers completed an online survey asking about ideal, feared and actual perceived teacher selves. 7-point scales measured the extent to which their actual was alike each of ideal vs. feared. Also collected were demographic and school context (location and SES) data, perceived barriers to goal achievement (school vs. self-related), affective (satisfaction, liking, demand, stressfulness), and behavioural outcome indicators (current goal achievement, planned persistence, effort). Types of ideal selves following content analysis included positive role model, positive student and staff relationships, and student achievement. Feared types related mostly to future disengagement and negative mood, class mismanagement, and poor student relationships. Contemporary and prior teacher role-models were the major source of teacher selves. Actual teaching selves were rated more congruent with ideal ($Mdn=5$) than feared ($Mdn=2$) selves, which themselves were not directly opposites ($\rho=-.41$). Congruence did not depend on gender, primary/secondary, undergraduate/graduate-entry teacher qualification, or school SES. Seemingly, internal resources were deployed in the attainment of the ideal self, while feared self enactment related to more disparate influences. Ideal self related to skills/abilities-related barriers ($\rho=-.16$), correlated positively with affective and behavioural indicators, negatively with demand and stressfulness outcomes. Feared self related to perceived school ($\rho=.32$) and skills/abilities-related ($\rho=.33$) barriers to goals, and remote school location ($\rho=-.16$; 1=remote-5=inner-city). Feared self correlated negatively with outcomes except stressfulness (ns with demand). Relationships were stronger for ideal than feared self congruence, and for satisfaction/liking outcomes. Relationships with the extent to which ideal self congruence exceeded feared were examined, to determine whether their discrepancy showed similar patterns to those for ideal self congruence. Correlations were a little stronger, indicating

possible selves operate independently, and, as a joint system. Possible selves theory provides a new perspective on motivations which impact beginning teachers' perceived goal achievement, perceived demand and stressfulness, satisfaction and liking, planned effort and persistence.

Keywords: possible selves theory, teacher motivation, ideal selves, feared selves, actual perceived selves

What do teachers want to achieve and does it matter? An achievement goal approach to teacher motivation

BUTLER, R. (Hebrew University of Jerusalem)

I shall present results from an ongoing research program which extrapolated from goal theory to examine the proposal that schools are an achievement arena also for teachers. As expected, responses of teachers in Israel (Butler, 2007) and Germany (Retelsdorf, et al, in press) to a new measure of Goal Orientations (GOs) for teaching loaded on four factors reflecting mastery, ability-approach, ability-avoidance, and work-avoidance goals for teaching. More important, results from studies using diverse methodologies (cross-sectional and longitudinal), informants (overall, some 600 teachers and 1200 of their students) and data-analytic strategies (hierarchical regression, SEM, multilevel modelling) confirmed that teachers' GOs were coherently and differentially associated with teacher wellbeing (Retelsdorf, et al, in press) and adaptive versus avoidant help seeking (Butler, 2007). They also predicted not only teacher endorsement of mastery versus performance-orienting instructional practices, but also student reports of teacher encouragement of student question-asking (Butler & Shibaz, 2008). Overall, mastery GO emerged as very adaptive; ability- and work avoidance GOs were both maladaptive, in rather different ways. These results make a significant contribution to extending and validating an approach to teacher motivation that offers a new perspective for understanding and studying teachers, teaching, and teacher influences on students. This framework can be faulted, however, for failing to consider ways in which motives for teaching and learning

differ. I shall also present new data from studies that examine whether strivings to achieve close and caring relationships with students constitute a distinct class of relational goals for teaching. Responses of 120 trainee and 290 practicing teachers in Israel who completed an expanded version of the Goal Orientations for Teaching measure confirmed that five new relational goal items loaded on a fifth factor, distinct from the other four kinds of achievement goals. Several months later, students in the classes of 50 randomly selected teachers reported on their teachers' instructional practices. Data analyses currently underway will examine the novel prediction that teachers' relational GO for teaching will emerge as the strongest predictor of teachers' socioemotional support as reported by their students several months later.

Keywords: goal theory, achievement, goal orientation, teacher wellbeing, help-seeking

The contribution of biological and environmental factors in health related behaviours: The role of cognition and psychological change

Chair(s): STREET, S. (School of Psychology and Counselling and Institute of Health and Biomedical Innovation QUT)

A central theme of modern psychological theory and practice is the notion that cognitive function across the lifespan is a result of the reciprocal influence of both biology and the environment. Disruptions to cognition can occur as a result of a multitude of factors encompassing any combination of biological or environmental precursors and can drastically alter a person's life trajectory. Furthermore, cognitive impairment and dysfunction are rapidly becoming an overwhelming health care burden worldwide as industrial and developing nations struggle to cope with the incipient increase in neurological and cognitive pathologies such as dementia and stroke. A better understanding of how biology and the environment operate individually and interactively to create the conditions in which cognitive dysfunction might emerge is critical for better management of this growing social and public health issue. Moreover, an understanding of this interaction will provide valuable information on which to base interventions to either prolong cognitive function into old age or manage environmental conditions to reduce the impact of cognitive dysfunction in at risk or already affected groups. This symposium will provide a snapshot of research including observational studies investigating factors that might contribute to reductions in the risk of cognitive decline in old age and interventions to increase compliance or psychological readiness to engage in positive health related behaviours. The first study presents data examining the interactive effect of omega-3 polyunsaturated fatty acids and physical activity as factors predicting mild cognitive impairment in older adults. The

second study provides the results from a brief motivational interviewing intervention with obstructive sleep apnoea patients to increase compliance in the use of CPAP therapy. The third study reports on the results of an investigation into the effects of complex mental or physical activity on cognitive function in a sample of older women. The final study will examine behaviour change in relation to physical activity in a group of stroke victims. This symposium brings together several lines of research that will be informative for psychologists with an interest in cognition and health behaviour.

Interaction of n-3 polyunsaturated fatty acids and physical activity predict reduced risk of mild cognitive impairment: preliminary results.

STREET, S. (School of Psychology and Counselling and Institute of Health and Biomedical Innovation QUT), SINN, N. (Sansom Institute for Health Research University of South Australia), MILTE, C. (Sansom Institute for Health Research University of South Australia), HOWE, P. (Sansom Institute for Health Research University of South Australia)

The aim of the current study was to examine the interactive effect of omega-3 polyunsaturated fatty acids (n-3 PUFA) and physical activity in the expression of mild cognitive impairment in older adults. Male ($n=50$) and female ($n=33$) adults > 65 years satisfied the selection criteria and agreed to participate. MCI was identified using the following criteria: A Standardised Mini-Mental State Exam (SMMSE) score of greater than 24; and a score on the Verbal Paired Associates 1 (VPA1) from the Wechsler Memory Test 1.5 SD below the mean; or a DemTect score of between 9 and 12. The MCI ($n=53$) and non-MCI ($n=29$) classification was dichotomised for use as an outcome variable in subsequent logistic regression analyses. Physical activity was assessed with the LASA Physical Activity Questionnaire (LAPAQ). Participants also provided a pre-prandial blood sample from which erythrocyte levels of the n-3 PUFAs docosahexaenoic (DHA) and eicosapentaenoic (EPA) acid were analysed. Binary logistic regression was conducted using MCI/non-MCI as the outcome and three predictor variables:

n-3 PUFAs; total time engaged in physical activity (TPA); and an interaction between n-3 PUFA and TPA. n-3 PUFA was significantly associated with a reduced risk of MCI (OR 2.124 [CI 1.094 - 4.127]). The interaction between n-3 PUFA and TPA was also significantly associated with a reduced risk of MCI (OR 1.0065 [CI 1.000 - 1.012]). An increased erythrocyte concentration of the n-3 PUFAs EPA and DHA was associated with increased odds of a non-MCI classification. The combined effects of physical activity and n-3 PUFAs EPA and DHA may provide additional protective benefits against the development of MCI in adults over the age of 65 years.

Keywords: *omega-3 polyunsaturated fatty acids, physical activity, cognitive impairment, older people, risk*

Improving adherence to continuous positive airway pressure therapy with motivational interview

SMITH, S. (Centre for Accident Research and Road Safety QUT)

Obstructive Sleep Apnoea (OSA) is a common and serious sleep disorder with high associated health costs. Continuous Positive Airway Pressure Therapy (CPAP) is the standard treatment for moderate –severe OSA. Despite the effectiveness of this treatment, adherence is generally poor. Psychological factors are the major predictors of adherence. A Motivational Interviewing (MI) intervention was designed to target and improve specific beliefs associated with poor adherence. This randomized control trial assessed the benefit of adding a brief MI to treatment as usual for OSA (TAU). 101 consecutive patients (68% male) who were newly diagnosed with OSA and naive to CPAP, were randomly assigned to nurse-led MI + TAU (50 participants) or to TAU only (51 participants). MI patients received 2 x 30-45 minute sessions of MI before starting CPAP, and one 20-30 minute booster session 1 month after CPAP prescription. The intervention was standardized through training and a treatment manual. Objective CPAP adherence (hours of machine use per night) was assessed at 1, 2 and 3 months. Intent-to-treat analyses demonstrated that by 3 months, patients who received MI+TAU used CPAP 50% more of the

time than those who received TAU alone (4.61 vs. 3.08 hours per night, $p=.05$, “effect size” $d=.58$). MI+TAU patients accepted CPAP more readily (4% vs. 25% rejection rate, $p<.01$) and started treated much earlier after receiving the prescription (9 days vs. 34 days to fill CPAP script, $p<.01$). Of patients who received MI+TAU, 61% adhered to CPAP >4 hrs per night versus 37% who adhered >4hrs in TAU only ($p=.02$). Motivational Interviewing is a brief and effective intervention which improves CPAP acceptance and adherence rates when compared to standard care alone. Change mechanisms appear to be better self-efficacy (confidence) in being able to use the treatment, and lower perception of the impact of potential Barriers to CPAP use. The intervention was well accepted by the patients.

Keywords: *continuous positive airway pressure therapy, motivational interviewing, obstructive sleep apnoea, treatment, self-efficacy*

Episodic memory benefits in older women by means of cognitive and physical activity interventions

KLUSMANN, V. (Charite Universitätsmedizin, Benjamin Franklin campus, Berlin, Department of Psychiatry)

A decline in episodic memory is part of the cognitive aging process. Cognitive trainings have proven to be effective in improving specific cognitive skills but mainly lack in transfer effects and thus everyday relevance. A broader approach should be more advantageous. In addition, preclinical and clinical studies suggest that physical activity might also contribute to cognitive fitness. Results from the basic neurosciences suggest that environmental enrichment is crucial in generating these cognitive benefits. This study was designed to directly compare in elderly humans the effects of a broad, rather unspecific cognitive activity with a physical one. This randomized controlled trial evaluates a cognitive and a physical standardized 6-month intervention in 230 healthy women aged 70 to 93 years. The women participated in either a computer course ($n=81$) or an exercise course ($n=80$) or in the control group ($n=69$). Interventions consisted of 90-minute sessions thrice per week. Cognitive pre-post-

assessments included two different episodic memory tasks, a classical word list recall and newspaper story recall. Group differences (intention-to-treat) in change of cognitive performance were evaluated by analyses of covariance adjusting for corresponding baseline measure, intelligence, and years of education. Both the cognitive and the physical intervention groups showed significantly better episodic memory than the control group. In story recall, $F(2,224)=4.44$, $p=.01$, the gain of the intervention groups was due to a significant increase in performance, whereas in word recall, $F(2,224)=4.14$, $p=.02$, the advantage resulted from maintained performance levels in contrast to a significantly decreased performance in the control group. Physical exercise and broad mental activity are both means to enhance cognitive performance in older women. Performing a new stimulating activity in old age helps to delay age-related decline in those cognitive domains where pronounced losses otherwise occur. The enrichment characteristics of both activity types can explain the comparable effects. Novelty and challenge are assumed to be of particular importance.

Keywords: *episodic memory, cognitive aging, cognitive ability, cognitive fitness, performance*

Stay Active Stop Stroke (SASS/SASS-E) program trial: A pilot test of an intervention to enhance physical activity and psychological factors in people post stroke.

SULLIVAN, K. (School of Psychology and Counselling and Institute of Health and Biomedical Innovation QUT)

The aim of the current study was to extend an existing physical activity intervention for people with stroke from one that manipulates psychological variables only to one incorporating combined resistance and aerobic training exercise. This project extends an intervention called Stay Active Stop Stroke (SASS), a psychological intervention based on an expanded version of the Health Belief Model (HBM) to include an exercise component. Five post-stroke participants (male = 1) engaged in the SASS program, which included a formal education component

highlighting the modifiability of stroke risk through exercise. Group activities designed to enhance key psychological variables (e.g. self-efficacy, perceived benefits of exercise) were also conducted. Participants also completed one hour of combined resistance and aerobic exercise once per week for eight weeks. Pre and post intervention tests were administered to measure health beliefs, knowledge and psychological factors including exercise self-efficacy. Participants were also tested on physical variables including anthropometric measures, strength tests and functional fitness. Participants will be followed up at 3 and 6 months for further psychological tests. Trends in the data showed increases between pre and post intervention scores on stroke knowledge (9.6 to 10.2), readiness to exercise increased from 3.6 (between preparation and action) to 4.6 (between action and maintenance). This result is likely to be due to the small sample size. Nonetheless, there were increases between pre and post intervention scores on stroke knowledge (9.6 to 10.2), readiness to exercise increased from 3.6 (between preparation and action) to 4.6 (between action and maintenance). There was also an increase in self-efficacy from 59.25 ($SD=23.28$) to 70 ($SD=26.52$). Although none of the outcome measures reached significance, there were increases in some key variables including self-efficacy and readiness to exercise. These improvements suggest the lack of significance could be due to several factors including the low sample size obtained, the method of SASS delivery or the length of the intervention. Follow up data is to be obtained over the next 6 months to ascertain the robustness of any positive changes with respect to engaging in exercise in this group.

Keywords: *physical activity, health belief model, stroke, aerobic training exercise, stay active stop stroke*

The development and management of cross-cultural competence within military contexts

Chair(s): MCDONALD, D. (Defense Equal Opportunity Management Institute)

Today's militaries must be ready for a diverse range of missions focused on humanitarian, security, stabilization, and intelligence operations. To accomplish these missions, foreign language, regional, and cultural capabilities have become increasingly important. Consequently, the United States has placed considerable emphasis on developing and maintaining this expertise. Due to the unpredictability of future needs, adaptability in these capabilities is of pre-eminent concern. The development of cross-cultural competence (3C) offers the means by which this adaptability can be achieved. Simply stated, 3C for individuals refers to the knowledge, skills, abilities, and attitudes (motivations) which may enable individuals to interact with, or adjust to an array of cultures other than their own, even without prior exposure to those cultures. This differs from the notion of possessing expertise of a particular culture or region. By definition, however, 3C should foster development of regional or cultural expertise. 3C also not only refers to adapting to international cultures, but also to the cultures within one's own borders and institutions. Therefore, 3C also has relevance to intra-organizational teamwork, leadership, group-problem solving, and communications, particularly in culturally diverse organizations. To institutionalize 3C, substantial organizational cultural change is required, particularly as the military still relies on traditions that stress uniformity and homogeneity rather than strength through differences. Such a cultural change requires a multi-faceted approach through functions such as recruiting, selection, promotions, systems development, research, training, education, mission operations for success, and the priority given to 3C in strategic plans, policy, doctrine

and the budgets which drive them. Successful institutionalization also requires a valid measurement strategy not only at the individual level, but also at the organizational level as a demand signal sent back from operations to the aforementioned functions. A comprehensive measurement strategy will allow system adjustment and thus "institutional adaptability" to changing cultural needs or landscapes (i.e., organizational 3C). This symposium explores how military organizations view implementation of 3C within their own institutions; discusses how measures, metrics are applied, and challenges to effective measurement. Lastly, this symposium also highlights the concept of 3C related adaptation, both at the individual and organizational level.

Institutionalizing cross-cultural competence (3C) in the US Department of Defense

GREENE, A. (Office of the Under Secretary of Defense for Personnel and Readiness, Defense Language Office)

Cross-cultural competence (3C) – defined by the US Department of Defense as "the ability to quickly and accurately comprehend, then appropriately and effectively act, to achieve the desired effect in any culturally complex environment" - has been established as a critical enabler for mission success for the Total Force (DOD civilian and military personnel - active and reserve, officer and enlisted). 3C enhances the ability of units and individuals to perform successfully within the full spectrum of operations to include joint operations in a variety of cultural landscapes. The 3C concept has yet to be institutionalized in DOD doctrine and policy, thus reinforcing DOD's need to provide comprehensive and overarching guidance to manage the development, measurement and sustainment of 3C for the Total Force. To address this gap, the Office of the Under Secretary of Defense for Personnel and Readiness (OUSD P&R) is developing a "3C Roadmap" that will: (1) establish a common approach to defining and developing 3C; (2) define and prioritize DOD's Requirements for 3C; and (3) build and sustain a 3C-capable Total Force. This Roadmap is a direct result of the 2009 symposium, co-sponsored by OUSD P&R

and the United States Air Force, "The Role of 3C in Organizational & Mission Success." At this symposium, the importance of 3C was underscored by the broad range of communities of interest in attendance (education, training, and research), and over 40 DOD organizations from DoD Combatant Commands (COCOMs), and civilian communities. This Roadmap is not intended as a prescriptive approach to 3C, but will serve to provide overarching strategic guidance at the DOD level to the Services, thus maximizing the effectiveness of institutionalization. The existing vision and approach of each Service must be acknowledged and taken into account in the development of DOD's 3C Roadmap. This paper will provide an overview of how DOD's proposed 3C guidance will require Services to build and sustain the Total Force with cross-cultural competence to effectively operate, regardless of geographic regions, at the tactical, operational, and strategic levels throughout the full range of Joint, Interagency, intergovernmental, and multinational missions.

Keywords: US Department of Defense, Total Force, military, tactical, operational, missions

Developing a strategic cross-cultural competence (3C) learning continuum: The lifelong battle rhythm of 3C

SANDS, R. (Air Force Culture and Language Center)

Developing cross-cultural competence in a military organization is dependent on the learning and experiential interventions that are orchestrated over a lifetime of a Soldier, Airman, Sailor, etc. These "interventions" although composed of different content and delivery platforms are similarly aligned to 3 general learning (competence) objectives, cognitive knowledge, procedural skills, such as cross-cultural and intercultural communication and participant/observation and the development of "behavioral" skills, such as cultural relativism. This presentation will suggest a "battle rhythm" of necessary interventions that need to be sequenced appropriately that take advantage of existing institutional learning and training applications as well as applied "experiential" situations in the military for the development of cross-

cultural competence (3C). These interventions take the form of 1) curricular education – both in professional military education (PME) and continuing professional education (CPE), 2) curricular training – both in predeployment and existing training programs, and 3) experiential in the deployment of individuals to theater environments where 3C is critical in mission success. The individual interventions become "stages" of competence development and may focus on one or all three of the competence objectives, dependent on variables such as length of intervention, the facilitated nature of intervention - instructor-led or paced, individually-paced, or self reflected, the platform of delivery - either residential or distance-learning and the components of curriculum, based on learning style and platform - simulations, direct knowledge transfer, interactive student discussions, and self-reflection, to name a few. This battle rhythm can also play an active role in developing 3C proficiency guidelines where the number and type of intervention an individual completes can provide a framework for how proficiency is expressed and measured. This presentation will highlight the learning interventions, methodologies and content utilized to drive learning and insight within the individual, specifically types of existing educational interventions in use or being developed by the United States Air Force and then explore the fit of these interventions into the Air Force 3C Battle Rhythm of 3C learning.

Keywords: cross-cultural competence, military, learning interventions, communication, United States Air Force

The importance of intercultural competencies in dealing with diversity at work

VAN DER ZEE, K. (Institute for Integration and Social Efficacy, University of Groningen, The)

Previous work on the role of intercultural competencies at work has pointed at the relevance of five traits to success in a culturally diverse work context: cultural empathy, open-mindedness, social initiative, emotional stability and flexibility (van der Zee, Atsma, & Brodbeck, 2004; van der Zee & van

Oudenhoven, 2000, 2001). From a theoretical point of view, these traits can be divided in traits that function as a buffer against threat (e.g., emotional stability) and social traits (e.g., social initiative) that make individuals feel attracted to the challenging aspects of diversity (van der Zee, van Oudenhoven & de Grijjs, 2004; van der Zee & van der Gang, 2007). As a result, these two kinds of traits will be related to different appraisals of and different responses to characteristics of diverse work settings. In this presentation we will present data from samples of business students and employees on the predictive value of the five traits against different work outcomes. The five traits are measured with the Multicultural Personality Questionnaire (van der Zee & van Oudenhoven, 2000, 2001). Consistent with our theoretical perspective, data from a large employee sample suggest that individuals high on social traits particularly appraise opportunities associated with cultural diversity in their company, whereas stress-related traits primarily function as a buffer against perceived threats associated with increasing diversity. In line with this finding, a laboratory study revealed that stress-related traits may protect individuals from negative responses to diversity under threatening circumstances. By contrast, social traits did not provide protection against the influence of threat on openness to diversity. Interestingly, an additional dataset shows that individuals in work contexts with high emphasis on security and rules, such as the military and the police tend to score higher on such stress-related traits compared to professions with less emphasis on control, but on the other hand obtain lower scores on open-mindedness. The implications of these findings for employee selection and training are discussed.

Keywords: cultural empathy, openmindedness, social initiative, emotional stability, flexibility

Assessing cross-cultural competence as an organizational construct in the military

VAN DRIEL, M. (Defense Equal Opportunity Management Institute)

The measurement of cross-cultural competence is becoming increasingly important within the military context. Much is

known about the measurement of individuals' cross-cultural competence; however, comparatively less is known about the measurement of organizations' cross-cultural competence. This is surprising as cross-cultural competence has been observed to have clear implications for organizational functioning and outcomes, especially in military missions involving the promotion of peace, stability, and security (Elron, Halevy, Ben-Ari, & Shamir, 2003; Fitz-Gerald, 2003, Soeters & Moelker, 2003). Due to the limited knowledge available regarding cross-cultural competence at the organizational level, a variety of research efforts on the development of measures that will enable the assessment of cross-cultural competence as an organizational construct within the United States military. A general overview of these research efforts will provide insights into the utility of assessing the cross-cultural competence of military organizations as well as highlight relevant organizational and psychometric theory. This overview will allow an in-depth discussion of the development of a measure of military organizations' cross-cultural competence. The development of this measure involved an initial study that provided evidence for determining whether attributes of military organizations contribute to their cross-cultural competence, and whether organizational actions and initiatives are reflective of cross-cultural competence. Data from this study revealed the criticality of a variety of military organizations' cross-culturally related preparation and resources. Furthermore, the data also allowed identifying a number of organizational actions and initiatives as critical components of organizations' cross-cultural competence. These results indicated that there is a distinction between attributes of organizations that contribute to their cross-cultural competence, and organizations' cross-culturally competent performance. Using these data, a measure was constructed and deployed to military service members ($N=3366$) representing over 50 military organizations. The data from this second study provided evidence for the construction of a psychometric measure of organizations' cross-cultural competence. This measure was found to effectively capture differences in cross-culturally related preparation, resources and

cross-cultural performance between organizations included in the dataset. The implications of using this measure to provide guidance for the development of cross-cultural competence at the organizational level will be discussed in greater detail.

Keywords: cross-cultural competence, military, organisation, stability, performance

The strategic assessment of cross-cultural competence: Measuring the lifelong battle Rhythm of 3C

BRITTAİN, M. (Air Force Culture and Language Center)

Building cross-cultural competence (3C) within an entire branch of the military requires a strategic and holistic perspective to not only development of that skill, but also to measuring and assessing the effectiveness of intervention efforts. Previous attempts at developing 3C in military settings have often focused on ad hoc and disparate interventions that do not fully account for the multitude of factors that influence an individual's development of the new skills, which could range from their pre-dispositional characteristics, the effectiveness of the specific intervention, or even the predominant culture of the organization. Specifically military organizations should approach 3C development holistically, actively integrating and coordinating the respective learning interventions and factoring them into a rhythm that supports and builds on the competence objectives offered through each intervention as well throughout the entire development cycle. This presentation will focus on the efforts of a branch of the US military to build cross cultural competence within the total population of the service branch and across the full spectrum of learning and experience. It will discuss the components of their integrated, multi-level strategic assessment plan designed to measure the development of 3C across the span of Airmen's career of education, training, and deployment experiences. More specifically, the paper will discuss the assessment measures designed to capture changes in individual ability (e.g. both downrange in the theater as well as in the classroom), the effectiveness of curricular and

training effectiveness, and even changes within the organizational climate for skill transfer. It will leverage results and lessons learned from past iterations of interventions to present the key learnings and experiences at various levels of the continuum that facilitate insight and expedite transition from one stage to the next. Moreover, the paper will also address the selection implications of their development continuum, exploring the critical biographical, personality, and affective characteristics that may potential predispose individuals to more easily acquire and develop cross-cultural competence.

Keywords: cross-cultural competence, interventions, military, education, strategic assessment

The development, maintenance and treatment of body image concerns

Chair(s): RICCIARDELLI, L. (Deakin University)

Discussant(s): RICCIARDELLI, L. (Deakin University)

Body image has been recognised as a central component of the individual's self-concept for decades, and body image concerns have become pervasive across different age and cultural groups, and among both men and women. Body image is one of the first aspects of children's self-concepts to develop, and given that physical attributes are both visible and easily accessible it is not surprising that children as young as six years of age already demonstrate body image concerns. The first paper in the symposium provides a comprehensive assessment of the body image concerns among both preadolescent girls and boys. These include body shape dissatisfaction, attitudes and feelings about body and appearance, the desire of being more muscular, height satisfaction, and social physique anxiety. Body image concerns increase in frequency and severity during the adolescent years, as this is a time of substantive social, physical and cognitive change. Studies are also showing that body dissatisfaction and related behaviours are increasing in developing non-Western countries, and that one of the main factors contributing to these problems are sociocultural pressures to attain an ideal body shape. The second paper examines the perceived pressure from the media, family and peers regarding the body image ideal on the body dissatisfaction and body change behaviours among Chinese adolescent girls and boys living in China. While body image problems develop during childhood and adolescence, these continue to be maintained during adulthood. Therefore, it is important that more research examines the risk factors and evaluates treatment programs for both adult women and men. The third paper examines the relationship between body image and self-esteem across age and gender in adults aged between 20 and 86 years, while the fourth paper examines the

evaluation of a group based cognitive behavioural therapy program for treating body image concerns among adult women and men. Finally, the discussant will address directions for future research and the implications of the findings for improving the health and well-being of each of the different age and cultural groups.

Body image in children aged 8-12 years and its relationship with participation in sports

NAVA, F. (La Trobe University), XU, X. (Sichuan Normal University), PIERSON, J. (La Trobe University)

Body image disturbances are becoming increasingly common amongst younger people. Indeed it is not uncommon for females and males in early adolescence to be dissatisfied with their body shape. This is of particular concern given the relationship between body image dissatisfaction and disordered eating. Further, recent evidence is emerging which suggests that preadolescent children may also experience body image concerns. There is also some recent evidence that which suggests that body image can influence a child's willingness to participate in certain sports and physical activities. The purpose of the present study was to examine body image and its relationship with participation in organized sports among pre-adolescents in a survey design. 300 from grades 3 to 6 (8-12 years old) from a representative sample of 13 Catholic elementary schools in the Northern region of Melbourne, Victoria participated in the study. Demographic information was obtained regarding age, gender, and ethnicity. Information about body image shape satisfaction, attitudes and feelings about body and appearance, desire of being more muscular, height satisfaction, social physique anxiety, and participation in sports was also obtained. It was found that children as young as eight showed signs of body dissatisfaction and body image influenced their participation in aesthetic sports. Results, which have implications for child and adolescent health care professionals, will be discussed particularly in relation to the relationship between body image and participation in sport.

Keywords: *body image, pre-adolescents, body dissatisfaction, disordered eating, attitudes*

Sociocultural influences and body dissatisfaction among Chinese adolescents

XU, S. (Sichuan Normal University), MELLOR, D. (Deakin University)

There is evidence that rates of body dissatisfaction and disordered eating are increasing in developing non-Western countries. However, research into the factors that contribute to the body image perceptions and behaviors of non-Western populations is limited. Studies conducted with Western samples demonstrate that sociocultural factors play an important role. Perceived pressure from the media, family and peers regarding body image ideals have been shown to contribute to body dissatisfaction and the use of body change strategies. The findings are discussed in relation to previous research in both Western and non-Western contexts. The current study explored how these sources of sociocultural influence relate to body dissatisfaction and body change behaviours in 517 Chinese adolescents: 219 adolescent boys and 298 girls living in Chengdu in China. Chinese girls reported greater dissatisfaction and were influenced by sociocultural pressures to a greater extent than Chinese boys. Studies are now required to explore the nature of these influences and to further understand observed sex differences in the relationship between perceived sociocultural pressure and body perceptions and behaviours.

Keywords: *body dissatisfaction, disordered eating, body image, body change strategies, China*

The relationship between body image and self-esteem across age and gender: A longitudinal study

FULLER-TYSZKIEWICZ, M. (University of Canberra)

Despite research findings indicating that body satisfaction and self-esteem are related in adolescence and early adulthood, extant literature is less conclusive about the stability of this relationship in middle age and beyond. Moreover, the majority of previous studies have failed to consider the relevance of body

satisfaction within the context of other domains of satisfaction that may have greater influence on self-esteem in mid- to later life, such as satisfaction with life achievements, relationships, community engagement and accumulation of material possessions. The purpose of the present study was two-fold; first, to re-evaluate the importance of body satisfaction for self-esteem changes across the lifespan and, second, to examine whether initial levels of body satisfaction were predictive of changes in self-esteem over a two-year interval. Participants were 150 men and 239 women aged between 20 and 86 years ($M = 59.73$) who responded to a questionnaire assessing self-esteem, body satisfaction and other key domains of satisfaction (e.g., satisfaction with health, relationships and community engagement) at baseline and two years later. Although the bivariate relationship between self-esteem and body satisfaction was stable across age and gender, the relative importance of body satisfaction for self-esteem changed over the lifespan for both genders. Furthermore, the longitudinal analyses revealed that T1 body satisfaction levels in female participants predicted T2 self-esteem, particularly for younger participants. Satisfaction with life achievements at T1 was also predictive of T2 self-esteem. None of the domains of satisfaction (including body satisfaction) were unique predictors of T2 self-esteem in male participants, even when potential age effects were controlled for. Present findings support the link between body satisfaction and self-esteem, but also highlight the importance of considering age- and gender-related differences in the magnitude of this relationship. Directions for future research to more fully assess the factors that may be moderating the relationship between self-esteem and body image in different age groups are discussed.

Keywords: *body satisfaction, lifespan, gender, longitudinal study, age*

Group intervention for body image concerns in men and women

LEWIS, V. (Deakin University)

It is well researched that cognitive behavioural therapy on an individual level is effective in

treating body image concerns. However, little is known of the effects of group based treatment programs for women, least of all men. This paper discusses the outcome of several six week intervention programs run over the last three years to assist adults with body image concerns and eating disorders. Separate programs were run for men ($N=15$) and women ($N=35$). The programs were run by intern psychologists under the training and supervision of a psychologist specialising in body image and eating concerns. Male interns ran the men's group and women ran the women's group. The program followed a cognitive behavioural treatment approach partly including education about body image beliefs, challenging beliefs about the body and behavioural challenges were set as homework. Pre and post intervention questionnaires were administered to group members as well as a control group. The program showed improvements in body image perceptions to become more positive, higher satisfaction with the self and life in general. Participants reported the cognitive components to be the most effective and membership of a group as motivating them towards a positive body image. Results highlighted the need for societal change in terms of the way the body is evaluated as well as the specific components important for change to occur in an individual in terms of their body image and well being.

Keywords: cognitive behavioural therapy, body image, group intervention, eating disorders, well-being

The impact of ageing on capacity for and decisions about driving

Chair(s): MACHIN, T. (University of Southern Queensland)

Discussant(s): DORN, L. (Cranfield University)

This symposium will focus on developing a better understanding of the impact of ageing on drivers' ability to detect and respond to hazards and obstacles. While these abilities are important in decisions about whether to continue driving, a range of other factors will also impinge on these decisions. The key learning outcomes are: 1. to increase the awareness of researchers of the critical abilities that influence drivers' ability to detect and respond to hazards; 2. to encourage health practitioners to reflect on the range of factors that influence decisions about whether to continue driving; 3. to assist drivers to better understand the impact of ageing on their abilities; 4. to encourage designers and engineers to develop technologies that counter the negative effects of ageing; and 5. to provide road safety policy makers with a better scientific base with which to consider new legislation.

Hazard perception and cognitive ageing in older drivers

HORSWILL, M. (University of Queensland)

One driving-related skill that has been found to relate to crash risk is hazard perception, which has been defined as the ability to anticipate potentially dangerous situations on the road ahead. There has been relatively little research in exploring this phenomenon amongst older drivers. What research there is suggests that hazard perception appears to slow after age 55 though this finding is based on a sample in which age was contaminated by pathology and participants were not matched across age groups. Our aim was to determine how hazard perception declined in a sample of healthy drivers who were matched across age and to investigate what cognitive, visual, or motor

factors might underlie this decline. We compared response latencies using a validated video-based hazard perception test across three groups: 22 mid-aged (35-55 years), 34 young-old (65-74 years), and 23 old-old (75-84 years) drivers. The groups were matched for factors unlikely to change with age: gender, education level, and vocabulary. Participants also completed a battery of cognitive, vision, and motor tests. We found that the old-old group were significant slower at responding to hazard than the young-old group and the mid-age group who did not differ from one another. This age difference was found to be mediated by individual differences in useful field of view (UFOV), contrast sensitivity, and simple reaction time. Hazard perception response latency, a measure that correlates with crash risk, does not appear to decline until age 75 in healthy adults, suggesting that signs of deterioration after age 55 found in a previous study could either be a result of pathology or of failure to match participants across age groups. This decline can be accounted for measures including UFOV and contrast sensitivity, both of which have also been found to correlate with crash risk in previous studies involving older adults.

Keywords: *hazard perception, age, reaction time, crash risk, driving*

Evaluation of a group intervention to promote older people's adjustment to driving cessation

PACHANA, N. (University of Queensland)

Many people voluntarily or involuntarily give up driving in later life because age-related changes, chronic medical conditions, the side-effects of medication or a combination of these factors affect their competence and confidence on the road. Driving cessation has been recognised as having substantial negative impact on the health and wellbeing of older people. However, rehabilitation efforts can assist older adults to maintain functional and activity levels even in the face of having surrendered their license. The University of Queensland Driver Retirement Initiative (UQDRIVE) program was developed to improve lifestyle and quality of life of older people facing driving cessation. Based on interviews

with over 250 older drivers, retired drivers, family members and health professionals, it includes a number of community based group interventions to improve mobility and maintain social interaction. A randomised controlled trial of UQDRIVE is underway in Australia, with community-dwelling adults aged 60+ who had permanently ceased driving or were planning to do. Participants were randomised to either the UQDRIVE intervention or current practice (no intervention). Measures of wellbeing and lifestyle outcomes were undertaken prior to the intervention, immediately post-intervention and at three months post-intervention. For intervention participants, individual transport and lifestyle goal setting and evaluation using the Canadian Occupational Performance Measure (COPM©) were undertaken pre and post the intervention. Goals set by group participants included adjustment to driving cessation, driving safety, and role participation. Peer leaders are utilized in the delivery of the program content, which includes sessions on local transport options and pedestrian safety issues, (incorporating group outings and a safety audit of local area); coping strategies, grief, and depression; and setting individual transport and lifestyle goals. Preliminary analyses of COPM scores indicate significant differences pre and post in perceived performance (mean difference = 3.22 points; $t = 7.11$; $df = 19$; $p < 0.0001$) and satisfaction with performance (mean difference = 3.53 points; $t = 6.52$; $df = 19$; $p < 0.0001$) scales. It appears this intervention enhances coping of older adults with the often daunting prospect of ceasing to drive. Participants are able to express their sense of loss in a safe and supportive environment. The peer leader instills confidence in their ability to try alternative transport solutions. Implications for clinical practice are provided.

Keywords: *driving, age, driving cessation, transport, pedestrian safety*

Obstacle avoidance and steering behaviour in younger and older drivers in changing light levels

HINE, T. (Griffith University)

To investigate if a decline in motion sensitivity in older age carries over to performance in a simple steering task in a driving simulator where moving obstacles are to be avoided. Younger and older groups' performance was compared at two light levels. There were 18 females and 14 males in the older group (aged 65 to 75 years old), and 17 females and 13 males in the younger group (18 to 22 years), each with a current license and without any reported vision problems. The steering task involved avoiding six cars randomly moving one at a time across the road from either left or right. Speed was moderated by the simulation program to control for speed-accuracy trade-offs. There were six trials at each of two ambient light levels: low (11.8 – 7.2 cdm⁻²) and mesopic (0.96 – 0.61 cdm⁻²) at low contrasts (0.22) and each trial involved avoiding six cars using a Momo force-feedback steering wheel to 'steer' virtual car down the road. There was more motion sensitivity amongst the older group than the younger while in the simulator, even though the younger group reported more general susceptibility to motion sickness. The older group reacted with steering wheel movement as fast as the young group, but became slower in the mesopic conditions. Responses were faster for obstacles coming from the left as opposed to the right. The younger group took wider berths around the obstacles than the older drivers, older females being worst of all. In general, older drivers did not swerve as much as the younger drivers. Differences in steering behaviour between the young and old group is not a simple matter of slower response times. Rather, the older group do not make a sufficiently wide berth around the obstacles compared to the younger group. This is also true of females vs males, and especially true in older females. It is suggested that older drivers do not have a good sense of the spatial extent of the vehicle compared to young drivers.

Keywords: *age, motion sensitivity, driving, performance, moving obstacles*

The effect of stimulus salience on attention to motion in older drivers

CONLON, L. (Griffith University)

We investigated how motion sensitivity and accuracy detecting abrupt change in a complex visual environment could be varied when the salience (contrast) of the target stimuli was manipulated. Reduced accuracy and poorer sensitivity to motion was expected in an older when compared to younger group. We also expected consistent with Lu and Doshier's (1998) perceptual template model of attention that the addition of an attention cue would increase sensitivity and accuracy of the older relative to the younger group when the targets were of low but not high salience. Healthy older (over 60 years) and younger (20-40 years) drivers participated. The Useful Field of View (UFOV) and a measure of global motion sensitivity were used. Accuracy on the UFOV was assessed when the peripheral targets were of higher or lower salience than the central target. In the global motion task, signal elements were presented that were either of higher or lower salience than the concurrently presented noise elements. In a second manipulation an attention cue was presented prior to presentation of the high or low salience elements in the global motion task. Presentation of the higher salience target increased sensitivity to global motion and accuracy on the UFOV task when compared to presentation of the target of lower salience for older and younger groups. Although overall the older group had reduced sensitivity and accuracy, presentation of low salience targets produced greatest difficulties for the older group. Introduction of the attention cue which triggered top-down attention further increased sensitivity to motion and accuracy on the UFOV task for the older group only. Older individuals have greater difficulties than younger groups when extracting low salience target signals from higher salience noise in dynamic visual environments. Difficulties for the older when compared to the younger group were greater when the stimulus was of low salience, with older drivers being easily distracted by irrelevant salient stimuli. Adding an attention cue when the target stimulus was of low salience, increased the sensitivity of the older, but not the younger group. The implications of these findings for driving are discussed.

Keywords: *motion sensitivity, age differences, global motion task, driving*

Investigation of elderly drivers' hazard perception and driving performance

RENGE, K. (Tezukayama University)

The present study focused the relationship between elderly drivers' skill for perceiving traffic hazards and driving performance. The investigation was conducted in three driving schools in Japan. Participants totaled 95 drivers (mean of the age 71.7, 68 male and 27 female) who were divided into younger-elderly (from 65 to 70 years old), middle-elderly (from 70 to 75 years old), and senior-elderly (over 75 years old) groups. A hazard perception test was administered to them, after which they drove on a driving course. The frequencies of drivers' head movements were counted as a measure of drivers' searching behaviour. The fifteen traffic scenes and one scene for training videotaped by a high-vision camera (Victor JY-HD10) were presented to the participants. After looking at each scene, the participants answered on the sheets in the way of checking possible hazards. The hazards were classified into three types such as "obvious hazards (OH)", "potential hazards (PH)", and "hazards relating to prediction of other road users' behavior (BH)". A total of 57 hazards were included in all of the scenes, 12 of which were OH, 28 were PH, and 17 were BH. Differences in the total scores for hazard perception demonstrated a significant effect of age group ($p < .05$). The senior-elderly group had lower scores than other two age groups. The main effect was especially shown for potential hazards ($p < .01$). The significant relationships were found between frequencies of head movements and the total scores of hazard perception ($r = .425, p < .01$), and the scores of PH ($r = .455, p < .01$). Senior-elderly drivers could have a weakness for perceiving potential hazards such as crossing cars, bicyclists and pedestrians from dead zones of roads. The participants with lower scores of hazard perception had lower driving performance (searching head movements), which indicates that the participants who don't understand potential hazards show less searching behaviour at intersections.

Keywords: *driving performance, hazard perception, age, searching behaviour*

The International Classification of Functioning, Disability and Health Model: Implications for the use of tests and other measures

Chair(s): OAKLAND, T. (University of Florida), MPOFU, E. (University of Sydney)

Discussant(s): THERON, L. (Northwest University), DAVIDSON, G. (University of Sunshine Coast)

The purpose of this symposium is to synthesize findings from a recent scholarship that discusses the status of test development and use in rehabilitation science and practice in light of the World Health Organization's International Classification of Functioning, Disability and Health (ICF). This state-of-the-art literature is found in two recent (2010) books edited by Elias & Oakland: *Assessment in Rehabilitation and Health as well as Rehabilitation and Health Assessment: Applying ICF Guidelines* and with contributions from more than 100 world-renowned experts. The specific objectives of the symposium are to: (1) provide a brief overview of the ICF, with implications for assessment, (2) review prominent themes in reference to ICF-related measures of adaptation, adjustment, and participation, (3) map ICF domains that are over-represented and under-represented in current rehabilitation and health assessments, (4) explore the relevance of the ICF to interprofessional education, (5) identify needed advancements and trends in the use of the ICF in the context of assessment, and (6) showcase rehabilitation and health assessment procedures from under-represented ICF domains.

Mapping rehabilitation and health assessments to the International Classification of Functioning, Disability and Health

OAKLAND, T. (University of Florida)

The rapid proliferation of rehabilitation and health assessment tools historically has evolved in disciplinary silos thus hindering efforts to communicate effectively among members of multidisciplinary treatment teams. The WHO International Classification of Functioning, Disability, and Health (ICF) offers promise or aligning measures of health outcomes for multidisciplinary health care providers. The ICF proposes a finite number of structures and domains within which assessments could be understood as well as how the results of assessments can be interpreted to address functioning, broadly construed. Assessments designed to assess functioning in the biophysical domains aligned with the medical interventions have more use and research than those for personal and environmental factors that influence functioning. The symposium presents the outcomes of a comprehensive project to document and map measures used to assess functioning in both the biophysical and personal-environmental domains. Approximately 100 international leaders in rehabilitation and health assessments discussed state-of-the-art assessments that support important rehabilitation and health practices. Topics include real and virtual tools to measure functioning, the physical environment, and econometric features of one's health status. Specific measures were mapped to the ICF. Their quality and evidentiary basis also were discussed. More than 60 major forms of assessments and more than 1,000 specific procedures and instruments were identified. Almost no measures (<.01%) were considered by these experts to need to be mapped to ICF domain. All ICF domains can be assessed using existing measures of functioning. Efforts to document the evidence base for the specific instruments are likely to continue in the foreseeable future. Measures that provide a parsimonious assessment of ICF domains are needed to ensure their cost-effectiveness and reduce the burden of care.

Keywords: disability, rehabilitation, health, health care providers, world health organization

An International Classification of Functioning, Disability, and Health based model for assessing environmental

barriers and facilitators to activity and participation

SANFORD, J. (Georgia Institute of Technology)

The aim of this study is to present an International Classification of Functioning, Disability, and Health (ICF) based model of environmental assessment that incorporates the interactive effects of person (i.e., body function and structure) and press (i.e. environmental barriers and facilitators) on performance (i.e. activity and participation). Many methods may be used to assess environmental contributions to performance. However, few adequately address the key person, press, and performance factors—qualities essential to developing effective environmental interventions. Further, assessment methods vary significantly in their comprehensiveness of information and how that information is used in determining environmental intervention. This presentation will propose a comprehensive model that builds and expands on relationship capacity and contextual factors as they define barriers and facilitators and impact activity and participation. This model draws on the ICF, current literature on environmental assessment, and ecological models of person-environment interaction. Specifically, the paper will review the differences in understanding of the interactions among key constructs, leading to the development of a model that incorporates and accounts for the interrelationships among these key factors. Analysis of existing models suggest the degree to which the environment acts as a facilitator or barrier to activity and participation can be assessed only in relation to an individual's capacity and his/her performance outcomes. This finding resulted in the development of an assessment model that accounts for the interactive effects of body function/structure and strength of environmental demands (i.e., press) on activity and participation. Press includes individual factors (e.g. preferences and values); environmental factors include physical factors (e.g., attributes of space and products); social factors (e.g., values); and organizational factors (e.g., policies); external factors (e.g., legal restrictions, availability of interventions) outside the control of the

individual; and task factors (e.g., requirements of the activity, including lifting, pulling, and bending). The proposed model provides a framework for gathering information that is valid, reliable, and comprehensive. Such information is essential to the elimination of environmental barriers and promotion of environmental facilitators that provide an effective rehabilitation strategy

Keywords: *International Classification of Functioning, Disability and Health, environment, person-environment interaction, rehabilitation, performance*

Measures of physical and functional performance, including occupational functioning

HILLMAN, A. (University of Sydney), INNES, E. (Southern Cross University)

As assessment of physical aspects of functional performance typically first considers specific deficits in body structure and function and then may move on to an assessment of their possible impact upon activities and participation. Alternatively, an assessment process that first considers participation and the context for it facilitates a quick and accurate identification of each individual's therapeutic needs. This process will be illustrated through the use of a work-related assessment continuum. A process that helps describe a person-environment-activity interface is discussed, including assessment methods that help address relevant International Classification of Functioning, Disability, and Health (ICF) components. This process is grounded in clinical experience and scholarship. An integrated suite of assessments has been developed that fit well with the ICF model. The order in which these assessments occur is crucial. A 'top-down' approach is described, one that starts with occupational role assessment, leading to the identification of routines and tasks associated with valued roles (e.g. work). A work-related assessment continuum illustrates this approach. This 'top-down' approach to assessment of physical performance is consistent with principles of the ICF model and provides a focus leading to deeper understanding, accuracy, and economy in both assessment and subsequent

therapeutic interactions within a range of areas, including home and works settings.

Keywords: *International Classification of Functioning, Disability and Health, assessment, work-related assessment, functional performance, occupational role assessment*

Health utilities in cost-effectiveness analyses: Whose preferences count, and how?

CONNELLY, L. (University of Queensland)

To provide an overview of conceptual issues that are associated with utility weight measurement for cost-effectiveness analyses, including the use of pre-scored utility measures and so-called "direct" elicitation methods. The empirical consequences of eliciting weights from individuals who have experienced the conditions of interest, from expert medical panels and the general public will be discussed. Literature on utility weight elicitation will be discussed based on a conceptual framework in which various types of measurement error are characterized. Empirical evidence from the literature and from a recent survey of people with hearing loss will be discussed and the empirical consequences of asking different groups to characterize health-related quality of life (HRQoL) will be presented. HRQoL data from individuals who have actually experienced a particular condition of interest (e.g., hearing loss) and its attendant effects (e.g., difficulties with verbal communication) frequently are higher than similar data which are derived from the general population. Perhaps ironically, this suggests the use utility weight from samples of the former population tends to *decrease* the apparent cost-effectiveness of interventions that reduce the impact of health conditions on functioning. Answers to the question of whose preferences matter when eliciting utility weights, as indicators of HRQoL, have both philosophical and empirical dimensions. In a practical sense, the apparent cost-effectiveness of interventions designed to improve the HRQoL of individuals with an illness or a disability may be directly affected by the choice that is taken. The empirical consequences of such choices are of practical relevance, because many health sector funding bodies now require the

cost-effectiveness of interventions that are designed to improve HRQoL be reported.

Keywords: International Classification of Functioning, Disability and Health, utility weight elicitation, hearing loss, cost-effectiveness, quality of life

More than just test scores: Holistic neuropsychological assessment utilizing the International Classification of Functioning, Disability, and Health (ICF) framework

LEBLANC, J. (Victoria British Columbia)

The aim of this study was to review the strengths and weaknesses of quantitative versus qualitative neuropsychological assessment approaches and the meaning of neuropsychological assessment in the context of the International Classification of Functioning, Disability, and Health (ICF). Literature regarding meaningfulness of neuropsychological assessment for individuals in a health-care setting will be reviewed in the context of the ICF framework. The presentation will emphasize neuropsychological assessment's effectiveness for measuring an individual's abilities related to body structures, body functions, identification of limitations and abilities in activities and participation, and the individual's ability to perform in major life areas such as work and education. The merits and limitations of utilizing qualitative and quantitative methods of neuropsychological evaluation are reviewed in light of prevailing literature and from the author's experience in working with hundreds of individuals in rehabilitation setting. A representation of assessment methods for providing both qualitative and quantitative information for all major aspects of cognition will be presented. Their ecological validity in respect to predicting functional skills will be emphasized. The functional implications of considering assessment from a holistic perspective, including an individual's culture or other factors that may impact test performance, also will be discussed. The role of the rehabilitation neuropsychologist in the context of the treatment team is outlined together with the methods for increasing the effectiveness of the

team as a whole. Neuropsychological assessment in the rehabilitation and other health-related settings provides information for various needs, including diagnosis, treatment planning and intervention, and establishment of competencies. Many aspects of ICF classification are pertinent for neuropsychological assessment, as obtained data are meaningful only in the context of a person's holistic environment.

Keywords: International Classification of Functioning, Disability, and Health, neuropsychological assessment, rehabilitation, cognition, neuropsychological assessment

The International Council of Psychologists International Relations and Human Rights World Summit: Part 1 of 2

Chair(s): NEIL, S. E. S. (The International Council of Psychologists), EL-ZAHHAR, N. (The International Council of Psychologists), SILVERBERG, R.L.N. (The International Council of Psychologists)

Discussant(s): SILVERBERG, R. L. N. (The International Council of Psychologists)

The aim of the symposium is to: 1. Present human rights issues including women's, men's and children's rights; family rights, eradication of poverty, abuse, and violence; 2. Present international and cross-cultural issues; 3. Develop suggestion for action which are culturally relevant, and universal; and 4. Explore differences and similarities in human values.

Conflicts, violence, and peace: Models for establishing human rights and democracy within the frame of peace education

EL-ZAHHAR, N. (The International Council of Psychologists)

The purpose of this presentation is to illustrate the levels of conflicts and discusses the concept of peace. Also, it illustrates the preparation of individual and nations to establish human rights and democracy, and accept the process of peace and world mindedness through the Peace Education Model (El-Zahhar, 1995). On the other hand, it illustrates the strategic plan for Peace Education at formal, informal, and non-formal education. In addition, it illustrates a theoretical model to establish positive peace.

Keywords: *conflicts, peace, human rights, democracy, Peace Education Model*

Psychological values: Peace and well-being

O'ROARK, A. M. (The International Council of Psychologists)

The ICP conference theme for this year is Psychological Values Around the World. Group and individual values vary between and within cultural espoused values. Can psychological values transcend the global divides to provide a common ground for forging peace and well being for all? Ayn Rand's hypothesis is that realizing full value requires thinking logically [based on facts], having and striving for goals, and being satisfied that who and what you are makes a positive contribution wherever you are. These conditions require well-being, good health and good functioning of body and mind; using conflicting perceptions and interests to create solutions to problems, while maintaining respect for the rights of self, others, and the environment. Shared values are the foundation of trust. Trust is the condition for cooperative human relations. Scientific psychology insists on collection of evidence to support choice of actions that lead to well-being. Well-being is a psychological goal and a psychological means toward peaceful interpersonal relations. Promoting psychological values around the world offers a pathway toward world peace.

Keywords: *psychological values, peace, well-being, trust, interpersonal relationships*

Implacable hostility leading to parental alienation

LOWENSTEIN, L. F. (The International Council of Psychologists)

One of the most insidious problems of the past half a century or so, and perhaps even longer, is the implacable hostility which results when a relationship ends between two partners. The children are caught in the middle and are manipulated normally by the custodial parent be it male or female who has custody in order to turn the children against and to totally reject that other party no longer as part of the family. The paper describes 28 ways of assessing the fact that this has occurred and also provides some remedies once it has occurred. Remedies are difficult due to the judicial system who may not always comply with the psychological implications of children who are alienated from

one of their parents. Hence the biggest hurdle is psychologists working with the judiciary.

Keywords: *implacable hostility, custody, judicial system, children, parents*

Cross-cultural comparisons of citizen's attitudes toward war, invasion and torture and the implications for policy and action to protect human rights

MCCARTHY, S. (The International Council of Psychologists)

The Personal and Institutional Rights to Aggression and Peace Survey (PAIRTAPS) was developed by the Group on International Perspectives of Governmental Aggression and Peace (GIPGAP) at Boston University. The survey includes several Likert-Scale items such as: World Peace is Possible and Governments Have the Right to Invade another Country which respondents rate on a 1 (strongly disagree) to 7 (strongly agree) scale. Respondents are also asked to provide definitions of Peace, War and Terrorism. Over the past years, the survey has been distributed in over 40 countries. Preliminary results were published in a 4 Vol. set by Praeger International released in 2009. Additional comparative data will appear in a 4-volume set by Springer to be released next year. This presentation will compare the divergent responses of citizens from several countries in Asia, Europe, South America and Australia, as well as the U.S. and discuss how these attitudes, in turn, influence national and international policy toward human rights issues, specifically torture, invasion and acts of war, and peace-building. Most agree that peace is a basic human right and that it is achievable, but definitions differ. For example, the Russian sample was more likely to define peace as an absence of violence and destruction, the Malaysian sample was more likely to define peace as related to a stable and economically profitable society and the Brazilians were more likely to define peace as the presence of positive qualities such as harmony, co-operation and safety. Differences in responses related to torture, invasion and war based on social and political history and current social factors will be explored, with a focus on uncovering the types of experiences,

beliefs and other factors that promote peace-building.

Keywords: *The Personal and Institutional Rights to Aggression and Peace Survey, peace, war, terrorism, attitudes*

The International Council of Psychologists International Relations and Human Rights World Summit: Part 2 of 2

Chair(s): NEIL, S. E. S. (The International Council of Psychologists), MORGAN, R. (The International Council of Psychologists), SILVERBERG, R.L.N. (The International Council of Psychologists)

Discussant(s): SILVERBERG, R. L. N. (The International Council of Psychologists)

The aim of the symposium is to present human rights issues including women's, men's and children's rights; family rights, eradication of poverty, abuse, and violence; to present international and cross-cultural issues; and to develop suggestions for action which are culturally relevant, and universal and explore differences and similarities in human values.

The continuum of violence: From the girl-child to the woman to the older woman

DENMARK, E. F. (The International Council of Psychologists)

Violence committed against the girl-child has effects throughout the lifespan. When the girl-child grows up, she may see herself as a victim, which results in her being a target of violence that can continue into adulthood and old age. In some instances, when violence is experienced by the young girl, she may in turn as an adult commit violence against her children and parents. This cycle of violence is important for all psychologists in terms of intervention and treatment.

Keywords: *violence, children, lifespan, victim, cycle*

Parental acceptance-rejection theory studies

COMUNIAN, A. L. (The International Council of Psychologists)

Parental Acceptance Rejection Theory (PAR Theory) is a theory of socialization that focuses primarily on an aspect of parent-child interaction which has been labeled as the warmth dimension. Parental acceptance is theorized as a bipolar dimension that has acceptance on one end and rejection on the other end. The warmth dimension is the component of the parent child relationships that regards love, or the lack of thereof. Every individual can be placed on this continuum because everyone receives more or less warmth (or love) from his parents. Rohner (1975) sees parental acceptance rejection as a dimension of parenting, a continuum having to do with the warmth, affection, support, and caring, or simply love that children everywhere experience from their parents at one pole. At the other pole lies rejection or absence or withdrawal of acceptance and warmth. Exploratory factor analysis (EFA) studies have shown that the Parent Acceptance Rejection Questionnaire (PARQ; Rohner, 2005), which provides retrospective ratings of the relationships with mother and father during childhood, has four primary factors in more than 50 countries around the world. The factors are warmth/affection, hostility/aggression, indifferent/neglect and undifferentiated rejection. Using the same item clusters used in previous EFA studies, the current study examined the factorial validity of the 4-factor structure of the PARQ using confirmatory factor analysis (CFA). To achieve this aim, PARQ ratings were obtained from adults in the United States ($N = 492$) and Italy ($N = 296$). Results for both groups for ratings of both mothers and fathers showed good fit. Additional analyses at the item level also showed good fit for ratings of both mothers and fathers. Taken together, these findings indicated very good support for the theorized 4-factor model of the PARQ and for cross cultural application. Implications for further studies about environmental and situational influences of parental acceptance studies are discussed.

Keywords: *parental acceptance rejection theory, socialisation, parent-child interaction, warmth, Parent Acceptance Rejection Questionnaire*

Fathers and families: Responsibilities and challenges - Fathering: A life work for men and in some measure, women

NEIL, S. E. S. (The International Council of Psychologists)

Dr Neil will discuss Fathering from the perspective of the Satir Model from a practicing Family Psychologist's viewpoint. She works in a multicultural setting in Melbourne, Australia. Dr Virginia Satir maintained in her Humanistic Growth Model that "the form of a family does not determine its functioning." The integrity of fathering lies along the continuum of presence to absence, and involves physical and emotional inclusion or exclusion in families. Four levels of functioning must be honoured in family life: firstly, the Biological Father; secondly, the Real Father (involving many Fathering images in the child); thirdly, the Imaginative Father (portrayed from the mother to the children in the fathers' absence); and fourthly, the Cultural Father. The Satir Model promotes the Eye of Compassion instead of the Psychology of the Enemy. Fathering is a multifaceted job for both men and, in some measure, women. Future family policies must lead to more fully integrated fathering in the lives of modern families. Clinical cases from "The Multicultural Family Chessboard" and "The Psyche and Soma" therapy techniques will be briefly discussed.

Keywords: fathers, humanistic growth model, family policies, presence

The International Handbook of Cross-Cultural Counseling: An illustration of activist scholarship

Chair(s): HEPPNER, P. (University of Missouri)

Discussant(s): BLUSTEIN, D. (Boston College)

Counseling psychology in the United States has maintained a strong voice for social justice, and in so doing, has "uniquely positioned itself as a major resources for meeting the many pressing challenges of our global era" (Marsella, p. ix, 2009). Nonetheless, U.S. based models of counseling and psychology in general have both positively and negatively the science and practice of mental health professional worldwide. The International Handbook of Cross-Cultural Counseling (2009) is the first book to broadly illustrate the scope of counseling within different cultural contexts across 26 countries around the globe. Moreover, the book provides an in depth discussion about the status and current developments of the counseling profession in numerous countries around the globe. Most importantly the book explicitly ties cultural assumptions to counseling activities across the world. "In my opinion, the ...International handbook provides a substantive foundation for resisting the pressures of hegemonic globalization to impose a uniform and homogenized Western-based culture across the globe." (Marsella, p. ix, 2009). In essence, the Handbook is an act in context that promotes social justice through activist scholarship. Key objectives of this symposium are to: (a) depict activist scholarship by discussing the process of developing and producing the handbook based on guiding principles of diversity and social justice, (b) illustrate the synthesis of indigenous and international perspectives, (c) promote a local and international professional identity in the counseling profession, (d) depict the role of cross-cultural collaboration as an act of social justice not only between two individuals, but institutions, and countries as well around the

globe, and (e) discuss what we learned through the completion of this exciting project.

Swimming against the stream: The Handbook as activist scholarship

NORSWORTHY, K. L. (Rollins College)

Western psychology, particularly U.S. psychology, has had a profound impact globally. Unfortunately, it is often uncritically transported to and applied in other parts of the world without regard for local context, worldviews, indigenous wisdom and “ways.” Our colleagues from outside the west often experience many barriers to having their scholarship published in western mainstream journals; thus we are deprived of important psychological knowledge that is needed to truly understand and address the lived experiences and suffering of human beings across cultures and contexts. Psychologists and academics who successfully publish in dominant professional journals and publishing houses can use our privilege and access to resources to work in solidarity and as allies with our colleagues from various parts of the world to change this situation. We, the coeditors of the International Handbook of Cross Cultural Counseling, view this book as a form of activist scholarship whereby we made critical decisions about book content, contributors, and even language and APA style usage in an effort to privilege voices and ideas that often are not included in dominant psychological narratives and venues. Rich discussions emerged among ourselves as co-editors and also with our contributors about how best to “decolonize” this volume and support a different kind of book that drew out what has been known all along but often not expressed in public professional venues – how to reinvent psychology as a profession in a global context. The presenter, one of the book co-editors, will discuss our process of developing and producing the handbook based on guiding principles of diversity and social justice. She will describe how these principles influenced our choice of content (for example, an emphasis on indigenous wisdom and practices that are at the heart of healing and helping in various cultures) and how we collaborated with various chapter contributors

given their specific contexts (inconsistent access to internet, etc.), translation challenges (since the book is in English), and socio-cultural values and worldviews. The presentation will conclude with a discussion of several conundrums we faced in producing the book and what we learned through the completion of this very exciting project.

Keywords: culture, indigenous wisdom, professional journals, International Handbook of Cross Cultural Counseling, psychological narratives

Connecting the counseling communities: The handbook as international and indigenous scholarship

LEUNG, S. M. A. (The Chinese University of Hong Kong)

In a special issue of Applied Psychology: An International Review on “internationalization of counseling psychology”, Savickas (2007) identified four objectives or strategic goals important to the counseling profession worldwide, which were: (a) to define counseling psychology (or the counseling profession) from an international perspective, (b) to crystallize a cross-national professional identity, (c) to encourage construction of indigenous models, methods, and materials, and (d) to promote international collaboration. In many ways, the Handbook aimed to play a role in moving the international counseling profession along the strategic objectives proposed by Savickas (2007). The editors of the Handbook are convinced that cross-cultural and international perspectives are instrumental to addressing the Western cultural biases that have permeated counseling theory and practice. A good proportion of the Handbook chapters were authored or co-authored by scholars from countries around the world, offering their voices on the development of the counseling profession in their regions, presenting indigenous concepts and practices, and articulating on the needs and future directions of counseling professionals. We hope that the aggregation of these “voices” would enrich the cultural diversity of the literature, and bring forth perspectives and insights that are vital to solving human problems and concerns globally and locally. The editors of the Handbook also

view the involvement and contributions of international authors as practices and illustration of collaboration in equal partnerships. Whereas authors were given guidelines and informed of the objectives of the country chapters, they were given much freedom to present to readers themes and issues that the important to their countries. The editors have not met many of the authors in the country chapters yet the collaborations could still be facilitated and efficiently maintained through e-mails and other forms of communication. The Handbook was a complex project yet the editors and authors showed their commitment and resilience, and it was a good lesson on international collaboration for all those involved. In the presentation, examples and voices from the Handbook will be used to illustrate the synthesis of indigenous and international perspectives, the satisfaction gained through international collaborations, and the advancement in local and international professional identities.

Keywords: counselling psychology, professional identity, international collaboration

Promoting social justice through cross-cultural collaboration around the globe

HEPPNER, P. (University of Missouri)

This presentation will provide observations and conclusions about the important role of cross-cultural collaboration in promoting social justice, and the essential interface with cross-cultural competence. The Handbook illustrates the promotion of social justice through culturally sensitive cross-cultural collaboration. Cross-cultural collaboration can be most rewarding, but also most frustrating. The outcomes can not only result in completion of important projects such as the Handbook, but perhaps even more importantly, in promoting social justice from the individual level to the macro level. The presentation will focus on ten conclusions about important ingredients or skills associated with successful cross-cultural collaboration: (a) positive initial contacts, (b) building a trusting, mutually beneficial, and appreciative relationship, (c) increasing levels of cross-cultural competencies, (d) learning by experiencing, (e) positive problem solving attitudes and approaches, (f) multiple benefits

in preparing the next generation, (g) serving in a bridging role as a change agent, (h) institutional support, (h) an essential interface with cross-cultural competencies, and (i) good yuan-fen. The presentation will conclude that although cross-cultural relationships vary greatly across individuals, cross-cultural competencies are necessary but sometimes insufficient. Good yuan-fen, or the good luck by which people with the right chemistry are brought together for some reason, and find something meaningful in learning about our cross-cultural journey and collaboration. Moreover, it will be maintained that cross-cultural collaboration can be a powerful mechanism to promote social justice not only between two individuals, but institutions, and professions as well around the globe.

Keywords: cross-cultural collaboration, social justice, cross-cultural competence, problem-solving

The introduction of cyber technology in health management

Chair(s): STOKES, D. (Australian Psychological Society)

“e-health” encompasses the application of electronic technology to support the provision of health services and does this in a multitude of ways. This is becoming a more urgent and vital issue in both health policy and community importance with current attempts to implement the electronic health record. The papers in this symposium outline the various components of both the record itself, the associated initiatives to support it as well as the social and ethical implications. The application of such technology to individual therapy is discussed.

The development of e-health in Australia

STOKES, D. (Australian Psychological Society)

There are major initiatives and developments emerging in Australia in the area of e-health. Currently, the most important developments are moves towards an electronic health record (ehr) for every consumer in Australia, a unique identifying number for every citizen of Australia and every health provider (individual health identifier -- ihi), software that can guarantee secure messaging and communication between providers, and ultimately computer software and hardware that will enable a web-based national network to effect communication across health providers in Australia. The Australian Government has been talking about an electronic health record since the early 90s. Subsequently (early 2000) State governments and the Australian Government funded a body called NEHTA (National E-health Transition Authority) to set data and hardware standards, create or adopt data elements and develop unique individual health identifiers for patients/clients, providers and provider organisations. This paper outlines some of

those developments in more detail and identifies the major obstacles and issues that such an initiative faces.

Keywords: *e-health, electronic health record, health care providers, Australia*

Building blocks for electronic health records

LI, B. (Australian Psychological Society)

Like most other workplaces computers are taking over the administration of health care. In addition to practice administration, communication and financial transactions, software programs are being developed and refined to handle patient data, clinical interventions and coordination of patient care. Associated with these rapid developments in e-health is the issue of compatibility between various software programs. This not only reduces their intended functions, it ultimately poses risks from a patient safety and quality of care perspective – the key beneficiaries for e-health systems. The Australian Government, through the National E-Health Transition Authority (NEHTA) began a number of initiatives in an effort to overcome this. Two of the most significant initiatives to date are the proposal for a unique identifier for consumers and providers, and the agreement of a uniform set of standards for medical software. These developments will provide a solid foundation for existing and future developments in e-health. In addition, they will enhance Australia’s contribution to the development of e-health globally. The presentation will examine how the ehr will be constructed and applied and how it is anticipated that the individual health identifier will function in practice.

Keywords: *computers, health care, practice administration, patient data, e-health*

Who will have access to my e-health record?

LI, B. (Australian Psychological Society)

The benefits of electronic health records are well recognised. They allow for timely access, reduce errors in reporting and are portable and

therefore accessible. However, there are also a number of potential pitfalls: unfettered access by others, the handling of private and sensitive information and the use of personal health data for research and other purposes. In recognition of these issues, the Australian Government proposed that electronic health records will be “patient controlled” with various categories of authorised access. This presentation will briefly outline the development of privacy and confidentiality considerations for the electronic health record in Australia. It will also highlight some key features available to practitioners in practice management software designed to protect sensitive patient information.

Keywords: *electronic health record, personal health data, Australian Government, practice management software*

therapy and the standards needed to be instituted.

Keywords: *web-based communication, e-therapy, practice management software, confidentiality*

The digital clinic – opportunities and responsibilities

FULLER, T. (Australian Psychological Society)

Convenience, efficient, “user-friendly”, cost effective – these are all terms used to highlight the benefits and promise of the technological advancements in web-based communication, service provision (e.g. e-therapy) and software packages. Psychologists and allied health service providers, especially those in private practice, appear to be missing out on the benefits and opportunities that exist and neglecting responsibilities to consumers. For example, a recent Australian Psychological Society survey of psychologists in private practice revealed that only a third of respondents used some form of practice management software to support their practice. Alarming, only a small fraction of these used some form of secure/encrypted messaging to protect confidential information. If this result reflects the practices of other allied health professionals, and without government incentives to do more, it would be reasonable to assume it does, it appears that many practitioners have much to gain and more to learn. This presentation aims to inform and alert health professionals to some of the key issues when harnessing the potential of a digital clinic with a particular focus on e-

The lives of Australian Aboriginal and Torres Strait Islander women

Chair(s): GRIDELY, H. (The Australian Psychological Society)

This symposium will discuss the role of Indigenous Australian women. These presentations are developed in sequence so that an historical overview discusses the ways in which colonisation has impacted on the lives of Aboriginal women, their health and wellbeing and the diverse ways in which they are and have been positioned and recognised in Australian society. A brief discussion about traditional and contemporary roles within the family and community and dynamics of family relationships and extended family life, particularly as grandmothers, mothers and daughters will be undertaken. Discussions about the social determinants, the strengths and stressors that affect the lives of Aboriginal women and their families will be presented. Indigenous experts will present specific papers into key issues such as domestic violence. Promising initiatives and discussion around developing genuine and long-term solutions from those working in field will be presented. Throughout, the role of Indigenous Australian women themselves in leadership and community empowerment is a major theme.

‘Mothers of Sin’: Australian Aboriginal and Torres Strait Islander women’s perceptions of their identity and gender

DUDGEON, P. (The School of Indigenous Studies, University of Western Australia)

This presentation sets the context for the symposium, briefly presenting a historical overview of Indigenous Australia and the current demographic situation of Indigenous Australian peoples today. Aboriginal women were described in various derogatory terms in historical accounts. ‘Mothers of sin of the north’ was used to describe this presenter’s

foremothers. To understand and describe how the processes of colonisation have shaped perceptions of gender and cultural identity the presenter engaged with my her lived experiences as an Aboriginal woman, woven with interviews from other Aboriginal women from the Kimberley region of north west of Western Australia. In this address, the presenter discusses the story of her grandmother’s life during a period of state surveillance that was concerned with controlling Aboriginal people, particularly, women. The oppressions that have and continue to confront Aboriginal women are unique to their group. Aboriginal women have suffered racism unlike white women; they have suffered sexism unlike Aboriginal men, and perceptions of their traditional roles have been distorted so that there is a belief that their roles as women were better under the structures of western colonization rather than being the slaves and chattels of Aboriginal men. As the frontier expanded, they were used for sexual services by white settlers, and yet conversely viewed with contempt in terms of their gender by their oppressors and by white society. Despite these historical oppressions, many Aboriginal women have maintained a strong sense of themselves and their identity. An important project in the struggle for Indigenous self-determination will be for Indigenous women to challenge sexist and racist perceptions about themselves and to talk up, reclaim women’s power and status in both the dominant society and in Indigenous society.

Keywords: Australian Aboriginal, women, identity, gender, colonisation

The social and emotional well being of Australian Aboriginal and Torres Strait Islander women

JONES, T. (Private Consultant)

This presentation examines the social emotional well being of Aboriginal people, with particular emphasis on women. The literature shows that Aboriginal women continue to occupy an unequal place in contemporary society on every measure. Specifically, in Western Australia Aboriginal women had higher unemployment rates and lower average

weekly income compared to other women; some 62 per cent of Aboriginal women were dependant on government pensions and allowances as their main source of income, and were likely to be under financial stress. Aboriginal women made up approximately 48 per cent of women prisoners in the justice system in 2004. These statistics are similar across Australia. Overall the patterns of personal stressors experienced by Aboriginal women were higher in all areas and some were unique to them unlike those experienced by other women. The negative impacts of these social determinants upon Aboriginal health and wellbeing are well documented. The net effects of these social determinants upon Aboriginal women are reflected in the various government reports which shows that infant morality rates were two to three times higher; hospital admission rates for children were twice that of others; the rate of child protection notifications have increased. Indigenous Australian women were three times more likely to report being a victim of physical or threatened violence than non Aboriginal women. In New South Wales, Aboriginal women reported domestic violence related assault at six times the State average, were four times more likely to be a murder victim and seven times more likely to be a victim of grievous bodily harm than other women. Indigenous Australians, both men and women, were over four times more likely to be hospitalised for alcohol related mental and behavioural disorders than other Australians. Alongside the effects of these social determinants, persistent oppression and transgenerational loss and trauma have had a negative impact on Aboriginal women's health. Many positive achievements have been made by Australian Indigenous Women in a range of different levels and settings. These will be profiled to demonstrate how Australian Indigenous women are working towards empowerment and self-determination.

Keywords: *emotional well-being, Australian Aboriginal, society, women, unemployment*

Australian Aboriginal and Torres Strait Islander women and issues of family violence

HOVANE, V. (Private Consultant and PhD Candidate)

For Aboriginal and Torres Strait islander people in Australia, intimate partner violence and family violence is a serious national concern. This presentation distinguishes between intimate partner violence and family violence to highlight the complex nature of violence in Aboriginal communities, and examines the intersections of race, gender and violence in the context of Aboriginal women's experiences of these types of violence. The positioning of Aboriginal women in contemporary society in the context of colonisation and its impacts on the kinship systems and lines of authority in Aboriginal communities that helped to regulate behaviour are discussed, together with the implications for addressing intimate partner violence and family violence today. This presentation draws upon the author's work and research in the area, together with her work as a member of national Violence Against Women Advisory Group. The author is currently undertaking research in the area of the fall-out from violence, specifically sexual assault and child sexual abuse in an Aboriginal community, and the implications for policy development, service delivery and clinical practice.

Keywords: *Australian Aboriginal, family violence, colonisation, community, women*

Lessons from the field: Working in empowering ways with Australian Aboriginal and Torres Strait Islander women

WALKER, R. (Telethon Institute for Child Health Research)

Aboriginal women's health status in general is besieged by issues of access to services, lack of cultural responsiveness and cultural safety, inappropriate health promotion, limited screening, high level risk factors, and early onset of chronic diseases. For example, Aboriginal and Torres Strait women have higher levels of diabetes and heart disease, and have poorer perinatal outcomes than non-Aboriginal women nationally. This is an area of grave concern given that there is sound evidence to show that providing targeted and

responsive antenatal care and screening of and treatment for specific conditions improves perinatal outcomes for Indigenous Australian women. This presentation overviews example of working towards addressing health and mental health issues in cultural competent ways. It is evident that a range of health strategies are needed to address the complex array of social and environmental determinants that contribute to the disparities in health status, level of care and outcomes of Aboriginal and Torres Strait Islander peoples. There is growing evidence that establishing and implementing culturally appropriate programs targeting specific diseases also results in effective improvements to Indigenous Australian peoples' health and lowers risks in a relatively short time. Despite the many successful programs being led by Aboriginal women and their allies a recent audit of antenatal service delivery in Western Australia reveals a significant gap in the knowledge and culturally responsive practice of many services signalling the need for greater cultural competence at all levels (system, organisational, professional and individual) across the health sector. The rationale for developing a cultural competence assessment process for health services is documented in a raft of existing policy guidelines and frameworks (both State and Federal) that aim to address the health inequities experienced by Aboriginal people. These are based on recognition that existing services and approaches to improving the health and wellbeing of Aboriginal Australians have not been successful. There is increasing recognition of the need for health practitioners and those responsible for the delivery of health services to develop strategies and structures that take account of the historical, cultural and environmental experiences and contemporary circumstances of Aboriginal people.

Keywords: Australian Aboriginal, women, chronic disease, screening, cultural safety

The process of knowing and learning in organizational research: How to shape and create practice knowledge? Some lessons learnt from researches in Health Organizations/Health Settings

Chair(s): SCARATTI, G. (Universita'Cattolica Del Sacro Cuore)

Discussant(s): BOSIO, A. C. (Universita'Cattolica Del Sacro Cuore), KANELIN, C. (Universita'Cattolica Del Sacro Cuore)

The symposium will propose ideas and papers that contribute to the development of the field of knowing and learning in organizations and social contexts. The specific focus will be on innovative ways of studying and sustaining knowledge management and knowledge sharing, intended as ways through which a social system can reflect, improve and change. The assumption at the basis of the call-for-proposal is that organizational knowledge provides better outcomes and advantages when it is close to the real contexts, when it is meaningful for people who create it, and when it is congruent with the ethical conditions that are used to sustain the research and its impacts. Key learning objectives include: to show findings on how people, networks and communities of practice can create and exchange knowledge, improving individual and organizational learning and performance; to consider new methodologies for gathering tacit and situated knowledge in social and organizational contexts; to present case studies and examples that push forward the research and the intervention around knowing in complex social contexts; and to reflect on context dimensions and the impact of studying on knowledge management and knowledge sharing. The symposium aims to be interdisciplinary, including different approaches and methodologies from a broad range of fields

that are keen to develop qualitative and combined analysis to improve their “lens” and to share their cultural perspectives in doing research (professionally and academically): psychology, sociology, human ecology, health science, anthropology, community-based research. The symposium is intended to provide considerable scope for discussion with and contributions from participants.

Working together in the space between expertise and ignorance

NICOLINI, D. (IKON, Warwick Business School, University of Warwick), MENGIS, J. (IKON, Warwick Business School, University of Warwick)

This paper critically appraises the widespread idea that working together in interdisciplinary conditions requires the integration of knowledge, which, on its part, requires some form of ‘sharing’ or ‘shared knowledge’ and the integration of different knowledges. We build on the theoretical concepts of common ground/grounding and interactional/contributory expertise in two cases of product development projects to analyze the processes through which common ground evolves in practice. The data were collected through multiple methods. We combined participant observation, ethnographic interviews, semi structured interviews ($N=47$), and the analysis of project documents and scientific papers produced during the initiative. We find that what is usually glossed as “sharing” or “integrating knowledge” is better understood as a processual effort to build common ground. This consists in a continuous process of both developing common knowledge and dissecting differences (dependencies), and also of confirming and questioning the legitimacy of experts. We depict these processes as relational and dialectic - positioning one’s own expertise at the same time as admitting ignorance relative to others’ expertise. Our analysis and discussion allows us to revisit the relationship between personal and communal common ground and refine theory on interdisciplinary collaboration by delineating grounding activities as specific to tasks characterizations. The article argues that the ideas of sharing and integrating knowledges

are problematic and that the development of common ground in interdisciplinary projects does not resemble the consensual collaborative activity through which shared understandings are (perhaps) developed in other settings. Instead, ongoing grounding activity is characterized, to some extent, by delimitating learning across professional boundaries, by establishing interactive expertise and by understanding differences and dependencies that legitimize ignorance and expertise.

Keywords: *integration of knowledge, shared knowledge, product development projects, common knowledge, expertise*

Knowing and learning in clinical contexts

GORLI, M. (Universita'Cattolica Del Sacro Cuore)

The paper discusses a specific methodology to detect and to analyze professional practices as a way to sustain organizational reflection and change. Based on an intervention conducted in a health district in Northern Italy, the work shows the use of a projective interview technique, the “interview to the double”, for the search of meaning around the practices in place and the possibility to rethink them. Opportunities and critical aspects of this tool in articulating and representing practice are presented, together with its potential in developing hypothesis for organizational change, and the process that, stemming from it, was developed in the specific context. The action-research intervention described is based on a psycho-sociological approach where narrative and ethnographic tools sustain the joint-work of researchers and organizational actors. Other than the “interview to the double”, the project utilized a group of core-tools like mapping exercises, ethnographic and narrative forms, group action plans and evaluative methodologies. The study is based on a qualitative analysis, with the assumption that a specific context can only be studied by going in depth into it and by getting close to how people know, practice and learn in it. The paper shows the use of the “interview to the double” as a way for situated learning and as a possibility for involving people in inquiry processes around their daily sequences of activities. The tool provides the organizational

actors with the possibility to share languages, evaluative criteria and meanings that are often implicit or taken-for-granted. This methodology also gives the opportunity to detect critical issues on which it is possible to undertake transformative actions, and through which it is possible to refine professional identities and practices. The approach and the tools utilized show the richness of the tacit and situated knowledge detected and its potentiality when used for reflexivity and transformational actions in organization. The article argues that the ideas of shaping and sharing knowledge are strong and useful when accompanied by an approach close to people that allow them to reflect on the meaning of that knowledge and on the possibility to challenge it.

Keywords: *professional practice, projective interview technique, organisational change, learning, transformational actions*

Organizational learning in Alzheimer services: an action-research.

GOZZOLI, C. (Universita' Cattolica Del Sacro Cuore)

The paper illustrates an action-research experience carried out in an Italian Foundation with a great tradition in dealing with Alzheimer patients. The experience has involved three services (Alzheimer Diagnostic Unit; Alzheimer Unit; Alzheimer Integrated Daily Centre), different professionals (doctors, nurses and paramedics), and patient's relatives (informal caregivers). The aim was directed to improve the quality of the services, with particular attention to the quality of relation between professionals and caregivers. The device used will be analyzed, as well as some crucial points which have characterized the process, and the effects on organizational learning. Data comes from different methods proposed with professionals and caregivers: semi structured interviews; clinical-social elaboration groups; DSVO (symbolic drawing of organizational life-space); CBI (caregiver burden inventory). Verbal data has been analyzed by content analysis with the support of the software Atlas-t, a symbolic – interpretative analysis on drawings and a statistical analysis on CBI. The most relevant consequences on organizational learning are illustrated: - the chance to

individuate the fragmentations of services; - a deeper knowledge of different type of relations between professionals and caregivers characterized by important collusive processes that have strong consequences on organizational practices. Moreover, are taken into account the device and tools, in a critical re-view. The prospective and the device used in the experience, shows that organizational learning can be reached through a creative and participative process with opens new working and practices perspectives, in individual, in groups and in organizations. Hence the Alzheimer patients sharing care has improved.

Keywords: *Alzheimer's disease, Alzheimer services, organisational learning, care*

Knowledge translation in the context of organizational change

ALUWIHAR, D. (University of Alberta), OLSON, K. (University of Alberta)

In this paper we use a case drawn from a healthcare setting to discuss the influence of organizational change on knowledge translation. The case under consideration is the implementation of an outpatient fatigue clinic in a large cancer centre in Western Canada, where a large-scale organizational change is currently underway. Many authors report that fatigue is the most distressing symptom experienced by cancer patients. Using principles drawn from knowledge translation, including application of evidence, broad consultation and collaboration, the authors recently developed a comprehensive multidisciplinary fatigue clinic to address this concern. The clinic is considered priority by senior administration, as it aligns with a core value of timely symptom management. However, implementation of the fatigue clinic has been delayed as it must now share the corporate agenda with organizational change. This paper draws its arguments from literature on organizational change, power, decision-making, adaptability, and knowledge translation. We use principles from the literature above to provide recommendations about how to move knowledge translation activities such as our fatigue clinic forward, despite the additional considerations required to effectively implement major organizational

change. The positive patient outcomes associated with working together to translate knowledge generated through research into changes in clinical practice are well established in the health care literature. Organizational change introduces some additional factors for consideration in this process but need not be viewed as an obstacle to knowledge translation.

Keywords: *healthcare, organisational change, knowledge translation, fatigue, decision making*

“From health knowledge into safe practices”: the role of patients’ and caregivers’ online communities

GRAFFIGNA, G. (Universita' Cattolica Del Sacro Cuore)

Medicine is both a science and a therapeutic practice. The (diffused) idea that a therapeutic practice could only be driven by formal science achievements and that scientific knowledge can be directly transmitted from healthcare professionals to patients is disconfirmed by several evidences. Knowledge about health and prevention require important processes of sharing and co-construction among healthcare professionals and patients. In this regard, online patient communities seem to be a privileged observatory to study knowledge co-construction processes that take place between patients and caregivers in regard to the management of health and illness. Furthermore Internet is becoming a more and more promising medium for research and interventions in the healthcare setting. The paper discusses the results of a qualitative study articulated in two phases and based on online communities with cancer patients and their caregivers, constructed ad hoc for the research purposes. The online communities run for more than a month and were aimed at exploring how patients and caregivers spontaneously negotiate and construct their preferences when deciding treatment and palliative settings. In particular the research explored how participants experience their “time with cancer” and attribute value to chemotherapy that is aimed at expanding life expectations but with the “cost” of really important side effects. “Time” is a crucial organizer of the illness experience and it

assumes a new dimension and value after the diagnosis of cancer. Furthermore patients and caregivers attribute different meanings to time after the cancer diagnosis and show a different approach to the management of daily life with the disease. This implies the construction of very peculiar criteria in deciding about treatments and palliative settings. These findings may orient therapeutic interventions more attuned to patients’ and caregivers’ needs. Furthermore, online communities are very useful tool to allow participants to disclose experiences, reciprocally express emotive support, share knowledge and co-construct “good practices” related to health and illness daily management.

Keywords: *therapeutic practice, scientific knowledge, healthcare, knowledge construction, cancer*

The psychology of Asian terrorism

Chair(s): SARWONO, S. (Persada Indonesia University)

Discussant(s): KNOWLES, M. (Monash University)

Terrorism has been one of the most challenging threats the world is facing and would be faced in the unforeseeable future. Obviously, terrorism continues to pose serious threat to the international security and peace as well as economic prosperity and social development. Despite the fact that many terrorists suspects/perpetrators have been killed and apprehended and prosecuted, a number of terrorists figures which are now in the penitentiary and detention centres remain at large and are still potentially capable of influencing others with terrorism ideology that would lead to massive terrorist acts or attacks. The possibility is greater because radical movements, organizations and paramilitaries still exist in many countries like the Middle East, South and Southeast Asian, and some western countries. International organizations and governments have taken some measures to counteract terrorism, some with success and some others with less success. It is obvious that one cannot fight terrorism using military or police force only. Even when combined with economic, social or political approaches, they are still not very efficient. The Indonesian and Singaporean experience reveals that only when the police adopt psychology in their techniques and tactics, the counterterrorism act can be brought to its maximum results. However, after exchange of experience between the Indonesian and Singaporean police psychology services (February 2009, in Jakarta), it is evident that although there are many similarities, what has been done in Indonesia, cannot be automatically applied in Singapore and vice-versa. Therefore it is needed now to develop a common understanding of the psychology of terrorism and how to counteract it in some countries, and look for general principles. In this symposium, research results (academics) as well as

experiences (practice) of some countries will be shared and discussed.

Radicalization by internet

KHADER, A. (Behavioural Sciences Unit, Home Team Academy), TAN, E. (Behavioural Sciences Unit, Home Team Academy)

Can one be radicalised by the Internet? With the arrests of several individuals globally in recent years who had plans to pursue "violent jihad" after being attracted to terrorist and radical ideas through the mass media, the threat of online radicalisation is real and burgeoning. Given the limited available research on this phenomenon, there is a pressing need to study online radicalisation, how it takes place and therefore to counter and mitigate it. This presentation draws on the psychology of the internet, internet radicalisation and discusses an analysis of radical websites. It suggests implications for multi-tier prevention and interventions.

Keywords: *radicalised, Internet, terrorism, radical ideas, mass media*

Psychology of terrorists: 4 types

HAMDEN, R. (Human Relations Institute)

psychology as frameworks for analyzing terrorism and terrorists; to explore the psychological processes that creates a terrorist; and the development of unbiased and analytical thinking capabilities of terrorist's psychology. This program in Terrorist Psychology uses a clinical, psychoanalytical, and social psychology framework for studying terrorist groups and individuals, terrorist origins, goals, dynamics, ideologies, counterterrorism, and homeland security. Work in this course involves examination of the structure and dynamics of terrorists in North America, South America, Europe, the Middle East, Africa, Asia, and Australia. Terrorist strategies and tactics, the hot spots from which they evolve, the ways they operate, the use of the media, and theories of counterterrorism or negotiations are all covered. The history, present, and future of terrorism are indicated. Participants will

review definitions and typologies of terrorism, analyze specific concepts in context, discuss thoughts about terrorism. Differing types to identify and negotiation styles with each study of terrorist personalities and terrorist groups, including types, tactics, and trends on a worldwide scale as well as domestically on issues of prevention and Global Building. The aim is to increase awareness of cultural and multi-cultural issues through study of how social problems and social movements are related to, and affect, minority groups; to prepare for more advanced study in criminal justice/homeland security; and to learn the four types of terrorists: definition, assessment, categorizing, and counter-action.

Keywords: *terrorism, counter-terrorism, psychological processes, homeland security, personality*

The approach to re-educate terrorist convicts

DAHLAN, W. (University of Indonesia)

The aim of the current study was to examine the approach to re-educate terrorist convicts. Qualitative approach with focused-group discussions (weekly for 3 months) and face to face semi-structured interviews with 44 terrorist convicts in Jakarta in 2 prisons and outside prison (for ex-convicts). The participants were willing to discuss about their ideology with the facilitators even though they were hesitated at the beginning. The participants had very strong ideology and refused other ideologies and perspectives. The seniors had an important role in maintaining the ideology of the others. There is a strong phenomenon of group think. In one to one interviews, their opinions could be different. They seemed to have cognitive dissonance, so there was a possibility to change their attitude. However, the changes would happen at individual level and non ideological (strategic/tactical) issues only. The key word is critical thinking. Critical thinking makes it possible to argue against or for particular issue, regardless the person behind the issue. Critical thinking should and could be trained through systematic and structured dialogue.

Keywords: *terrorism, critical thinking, cognitive dissonance, ideology, group think*

Terrorism catastrophizing, perceived stress and death anxiety among university students of Pakistan

KAMAL, A. (National Institute of Psychology, Quaid-i-Azam University, Islamabad.), NAYAB, R. (National Institute of Psychology, Quaid-i-Azam University, Islamabad)

The purpose of the current study is to find the impact of terrorism among university students in terms of terrorism catastrophizing (TC), perceived stress (PS), and death anxiety (DA). The study, based on cross-sectional research design, consisted of 430 university students (male $N=183$, female $N=247$) from eight universities of Pakistan from Peshawar, Islamabad, Rawalpindi, Multan and Bahawalpur through purposive sampling technique. Terrorism Catastrophizing(TC) Scale (Sinclair & Alice, 2007), Perceived Stress (PS) Scale (Cohen et al., 2001) and Death Anxiety (DA) Scale (Goreja & Pervez, 2000) were used. Comparison was made among students regarding their gender, status of living, seen/affected by terrorist activity, religious inclination, and avoidance of crowded places, public transport & travel out of station due to terrorism. Pearson correlation showed a highly significant positive correlation between TC, PS & DA. Statistical analysis regarding gender has shown that both male and female students have higher level of TC & PS while females have more anxiety of death than males, whereas both hostel ides and day scholars have higher level of TC, PS & DA. Students who have seen or affected by terrorism, found to be more inclined towards religion, perceive high stress, more avoidant to visit crowded places and hesitant to travel out of station than students who have not seen or not affected by terrorist activity. Students who perceive high stress and death anxiety found to be avoidant of crowded places, public transport and travel out of station.

Keywords: *terrorism, perceived stress, death anxiety, hostel ides, religion*

The South African Personality Inventory

Chair(s): VAN DE VIJVER, Fons (Tilburg University)

The present study focuses on the development of a new personality inventory for South Africa (South African Personality Inventory, SAPI), locally derived from indigenous conceptions of personality in all 11 language groups. This project spans two stages: qualitative exploration and test development. In the first stage, data were collected by means of interviews in stratified samples from the 11 groups. The data were content-analyzed to derive the main personality dimensions as encoded in lay people's perceptions. In the second stage, scales tapping these dimensions will be developed from the output of the first stage and psychometrically tested, again per language group. Importantly, both stages employ the native languages: the interviews were conducted in each group's own language, and the final inventory will in each of the 11 language versions. This provides a valuable chance for emic expression and assessment of personality constructs. There are no a priori expectations whether culturally specific constructs would emerge or not; cultural differences either among the South African cultural groups or between them and Western groups are not hypothesized. Rather, the first stage of the project aims to explore indigenous perceptions of personality as comprehensively as possible. The final inventory might have a core common structure and specific constructs per group, or even have different structures in the different groups. The symposium has two parts. This first part describes the general background, item analysis procedure and two examples of studies of specific clusters.

The South African Personality Inventory: How far have we proceeded?

DE BRUIN, G. (University of Johannesburg)

The present study focuses on the development of a new personality inventory for South Africa

(South African Personality Inventory, SAPI), locally derived from indigenous conceptions of personality in all 11 language groups. This project spans two stages: qualitative exploration and test development. In the first stage, data were collected by means of interviews in stratified samples from the 11 groups. The data were content-analyzed to derive the main personality dimensions as encoded in lay people's perceptions. In the second stage, scales tapping these dimensions will be developed from the output of the first stage and psychometrically tested, again per language group. Importantly, both stages employ the native languages: the interviews were conducted in each group's own language, and the final inventory will in each of the 11 language versions. In addition, this paper describes the analytic procedures used to evaluate and select items for inclusion in the SAPI. Qualitative analysis of the SAPI data revealed nine broad clusters of personality attributes. Each cluster corresponds with a higher order trait and is represented by several correlated first order factors, which in turn, is represented by correlated items. Analysis is aimed at developing homogenous personality scales and subscales that function equivalently across different language groups. In step 1 items that correlate poorly with its designated higher order trait score are eliminated. In step 2 items are subjected to common factor analysis with oblique rotation. In step 3 the correlations between the factors are subjected to a higher order factor analysis. The higher-order structure is then transformed to an orthogonal hierarchical solution with the Schmid-Leiman procedure, which shows the relations of the items with the higher order factors and the first order factors. This transformation allows for the evaluation of items with respect to the entire hierarchical organization of the trait domain. Separate analyses are obtained for English and indigenous African language groups. Higher order and first order factors are compared across language groups by means of coefficients of congruence to evaluate construct equivalence across groups. A combination of qualitative and quantitative approaches has been adopted. The qualitative studies are briefly described. The analytic procedure of the quantitative stage is

demonstrated with empirical data. The current state of this multi-year project is described.

Keywords: *personality inventory, South Africa, South African Personality Inventory, language groups*

South African personality inventory: openness, facilitating, relationship harmony, soft heartedness

DE BRUIN, K. (University of Johannesburg),
MARAIS, C. (University of Johannesburg), NEL, A.
(North-West University (Potchefstroom))

The objective of this part of the project is to use obtained data from the South African Personality Inventory (SAPI) research project to generate and test valid and reliable items for Openness, Facilitating, Relationship Harmony, and Soft Heartedness. The four separate studies employ a common methodology that is outlined. Results of each cluster are presented. In each analysis the same procedure is followed. Principal component analysis will be conducted to determine whether all the items derived from the qualitative study have a loading of at least 0.20 on the first unrotated component. The analysis is repeated for each sub-cluster and identified items that failed to have a loading of at least 0.30. Items that fail both criteria (i.e. relating to the overall construct and relating to the sub-cluster) are not included in further analyses. Principal axis factor analysis is conducted on the remaining items to determine the amount of factors. The solution will then be rotated according to the Direct Oblimin criterion. Correlations between the factors are subjected to a higher order analysis, requesting only one factor. The higher order solution is transformed to a Schmid-Leiman hierarchical solution. The output of the study will be a questionnaire to measure intellect in a culture-informed manner across many ethnic groups in South Africa.

Keywords: *personality inventory, South Africa, South African Personality Inventory, principal component analysis, ethnic groups*

Development of a first draft experimental South African Personality Inventory

MEIRING, (South African Police Services)

The paper report on the developed of a first draft experimental South African Personality Inventory (SAPI). The experimental inventory was conceptualized on the theoretical assumptions of a 9 cluster structure. A further aim of the paper was to explore and examine the underlying dimensionality of the structure by administering the inventory to a multicultural group. The qualitative phase of the SAPI project yielded a nine cluster structure (e.g., Extraversion, Soft-heartedness, Conscientiousness, Emotional Stability, Intellect, Openness, Integrity, Relationship harmony and Facilitating) and consisted of 37 sub clusters and 191 facets. The original 52, 000 utterances formed the basis of developing an experimental item pool. Dimensionality will be tested by making use of first order hierarchical factor analysis. A second-order factor analysis will be performed on the correlations of the first-order factors, after which a Schmid-Leiman transformation will be applied to obtain a hierarchical orthogonal solution. The original 52, 000 utterances of the qualitative phase were transformed into 2194 content-representative items. 4 Anchor items representing each of the 191 facets content domains the clearest were selected as a first step in the inventory design. In a second step the items were further split into two experimental inventories of 180 and 182 items each. The two experimental inventories will be administered to a sample group of police recruits ($N = 1500$) at the South African Police Force. The results of the dimensionality will show the relations of the items with the higher order factors and the first order factors, which allow for the evaluation of items with respect to the entire hierarchical organization of the SAPI 9 clusters structure. Factors results will be compared across groups by means of a coefficient of congruence (Tucker's phi coefficient). Values > 0.95 will be taken to indicate factor equivalence, whereas values < 0.90 will indicate that the factors are sufficiently different to warrant close inspection of the differences. A comparison will also be made between the results of the two inventories. This paper will be the first study to report and to test the dimensionality of the 9 cluster structure as conceptualized in the first phase of the SAPI Project by means of a first draft experimental inventory.

Keywords: *personality inventory, South Africa, South African Personality Inventory, South African Police Force*

The tactile consumer

Chair(s): JANSSON-BOYD, C. (Anglia Ruskin University)

It has been recognized that touch can make an important contribution to the way in which consumer stimuli are handled and perceived (e.g. Ernst & Banks, 2002; Jansson-Boyd & Marlow, 2007; Peck & Childers, 2003). Over the last decade we have learned quite a few things about the role that touch can play in consumer experiences. However, there are still many unanswered questions in regards to the importance of touch in consumer settings. We still do not have answers to questions such as: Does tactile interaction affect the evaluation of all types of consumer stimuli? What happens when people have no previous experience of the tactile input (as the case may be when new products are launched)? Are people with extensive product knowledge more likely to want to engage in tactile interaction? This symposium will focus upon the 'role of touch' in consumption and seek to address some previously unanswered questions about touch. It will bring together researchers in the field to discuss how touch plays an important part in consumer behaviors. The presenters will cover a multifaceted perspective of touch and consumption, meaning that attendees will get an overall rounded view of up to date research within the area. Specifically the audience will learn more about: (1) Whether consumers make use of tactile inputs in their evaluations of products that normally generate little tactile interaction; (2) If subjective and objective knowledge effect the motivation to touch a product prior to purchase; (3) How a 'novel' class of c-fibre peripheral nerve afferents exist in human hairy skin, whose discharge properties correlate with subjective ratings of a tactile stimulus. (4) Whether or not 3D virtual touch impact on consumer behavior in interactive marketing. This research symposium is particularly aimed at researchers with an interest in consumer psychological aspects. However, it should also be of interest to researchers that focuses on haptics in general.

Making touch count: When do consumers evaluate tactile product features

JANSSON-BOYD, C. (Anglia Ruskin University)

This research explores whether or not tactile evaluation takes place for stimuli that normally generate 'limited' tactile interaction. It has previously been suggested that consumers' product evaluations are positively affected by tactile interaction. However, it is not known if it is applicable to products that people generally touch for brief periods of time, such as fast moving consumer goods. Tactile sensing and visual appreciation were compared with combined visual and tactile sensing of surface textures for two types of products (soap and biscuits). Three types of textures on the outside of either a soap or biscuit box and three sample swatches of the textures attached to the boxes were used in the study. Three soap or biscuit boxes were visually evaluated by the participants. This was followed by a blind haptic evaluation (meaning that participants could only feel but not see the stimuli) of the three textures, and then by a combined visual and tactile evaluation of the three differently textured boxes (either soap or biscuit boxes). The results show that people draw upon the tactile input when they evaluate products that normally generate 'limited' tactile interaction. Additionally, the results also demonstrate that the use of different types of surface textures have the capacity to change the way in which fast moving consumer products are perceived. This research furthers the understanding of how consumers use touch to determine overall likeability of products. The findings are of specific use for marketers and designers alike. From a marketing point-of-view it is important to consider when tactile interaction should be encouraged (depending on whether or not it is certain that the texture will be evaluated positively). Whilst designers should ensure that they are utilizing materials that are more likely to generate a favorable product perception.

Keywords: *tactile, product evaluations, marketing*

Touch and prior knowledge: The more you know, the more you need to touch... Maybe

PECK, J. (University of Wisconsin-Madison)

This research examines consumer subjective and objective knowledge and its effect on the motivation to touch a product prior to purchase. Prior research has shown that product categories vary in whether they motivate a person to touch. Specifically if a product category varies in a diagnostic manner in weight, texture, softness or temperature, then motivation to touch the product will be high. We extend this and find that consumers with more objective knowledge about a product category are more motivated to touch, regardless of the category. However, greater subjective product category knowledge does not necessarily result in a greater motivation to touch. Two studies are discussed. The first is a laboratory experiment using undergraduate students. Both objective and subjective knowledge of a product category are measured, as well as the motivation to touch a product. Two product categories are used, one in which the motivation to touch is greater, and the other in which the salience of touch is less. To demonstrate external validity, the second study is a field study with participants being deer and turkey hunters in the state of Wisconsin. We measure objective and subjective knowledge as well as motivation to touch hunting related products (guns and bows) prior to purchase. The results show that greater knowledge of a product category does not necessarily increase an individual's motivation to touch. More subjective product knowledge does not increase motivation to touch. However, greater objective knowledge does increase the motivation to touch. Great objective product knowledge results in individuals being aware that differences in touch attributes do exist within a category. This research expands our understanding of the sense of touch by investigating prior knowledge and its relationship to touch. This research has implications for the type of media selected by manufacturers and highlights the importance of retail and trade shows as compared to non-touch media, especially for individuals with greater objective product knowledge.

Keywords: *touch, consumers, product knowledge, product category, motivation*

Coding of pleasant touch by unmyelinated afferents in humans

MCGLONE, F. (University of Liverpool)

The aim of this study is to characterize the functional properties of a class of unmyelinated peripheral nerve afferents (C-tactile) found in human 'hairy' skin, which are hypothesized to provide the neural substrate for coding the affective and affiliative (pleasant) aspects of touch. Using the single nerve fibre electrophysiological recording technique of microneurography, a population of c-fiber afferents have been identified whose preferred stimulus is a low velocity stroking movement across a recorded unit's receptive field. A purpose built rotary tactile stimulator (RTS) was developed to deliver controlled moving tactile stimuli across a unit's receptive field, during microneurography recordings. The spike discharges of both myelinated and unmyelinated unit's were subsequently correlated with the mechanical stimulus properties of the stimulus. Psychophysical ratings of a participant's response to the affective qualities of the stimulus were also recorded, using a visual analogue scale (VAS). Neuroimaging (fMRI) studies provided evidence for the central representation of affective touch. Electrophysiological, psychophysical and neuroimaging data combine to demonstrate that a 'novel' class of c-fibre peripheral nerve afferents exist in human hairy skin, whose discharge properties correlate with subjective ratings of the pleasantness of a tactile stimulus. Soft brush stroking on hairy skin was perceived as most pleasant when it was delivered at velocities that were most effective at activating C-tactile afferents (1 - 10 cm s⁻¹), with a linear correlation between C-tactile impulse frequency and subjective pleasantness ratings. In contrast, the response of myelinated afferents increased with faster velocities (30 cm s⁻¹), and showed no relationship with pleasantness ratings. fMRI data, recorded during stroking the arm with a soft brush, showed activation in the posterior insular and orbitofrontal cortices. C-tactile processing is tuned to slow, gentle tactile stimulation of hairy skin, of a type that occurs during close affiliative interactions with conspecifics such as

the nurturing behaviours carried out between mothers and infants. Such tactile interaction may be distinct from sexual function as C-tactile receptors have not been found in genitalia. A system of C-tactile afferents, projecting to insular and orbitofrontal cortex, may thus constitute a privileged peripheral pathway for gentle, pleasant tactile stimulation of a social and affiliative nature.

Keywords: touch, peripheral nerve, neuroimaging, microneurography recordings, C-tactile processing

The impact of 3D virtual touch in consumer psychology

JIN, S. A. (Boston College)

Tactile input plays a key role in consumers' evaluation of products' substance properties. This study investigated 3D virtual touch created by *Novint Falcon* haptics interfaces and its impacts on consumer behavior in the interactive marketing of automobiles. It was hypothesized that consumers' instrumental Need for Touch (NFT) plays a significant moderating role in haptics interfaces. *Novint Falcon* is a haptic technology that interfaces with consumers through the sense of touch. It gives consumers a sense of touch with computer-generated environments, so that when virtual objects are touched through the haptics interface they seem real and tangible. The experiment employed a 2 (the nature of tactile stimuli: force feedback vs. no force feedback) X 2 (haptic orientation: high NFT vs. low NFT) full factorial between-subjects design. The results of the two-way ANOVA indicated a significant interaction effect between force feedback haptics stimuli and instrumental NFT on product evaluation (H1), $F(1, 229) = 4.60, p < .05, \eta^2 = .02$. The same pattern was found for enjoyment (H2), $F(1, 229) = 4.58, p < .05, \eta^2 = .02$. As hypothesized, consumers with high instrumental NFT experience a more positive product evaluation (H1) and enjoy the test-driving experience more (H2) when there are force feedback haptics stimuli as opposed to when there is no force feedback. In contrast, consumers low in instrumental NFT experience a more positive product evaluation and higher enjoyment of test-driving when they are exposed to haptics stimuli without force feedback. The present study empirically reveals

that haptic stimuli with force feedback versus those without force feedback have different effects on consumers who differ in their instrumental NFT. The results are consistent with the theory that consumers high in NFT are more significantly influenced by a marketing message that incorporates stronger haptic stimuli (presence of force feedback in the current experiment) than weaker haptic stimuli (absence of force feedback), whereas consumers low in NFT are less affected by haptic stimuli. This individual difference factor in haptic information processing has theoretical significance as well as practical implications for marketing strategies.

Keywords: Tactile input, Consumer behavior, 3D virtual touch, Touch, Product evaluation

The Tuning in to Kids parenting program: Outcomes with preschool, primary-school and pre-adolescent children

Chair(s): HAVIGHURST, S. (Mindful: Centre for Training and Research in Developmental Health, University of Melbourne)

This symposium will provide an overview of the Tuning in to Kids program and outcomes from three randomized controlled trials of the program. Tuning in to Kids teaches parents skills in responding to children's emotions in ways that have been found to contribute to children's emotional, social, and behavioural competence. Program content includes strategies to assist parents in regulating their own emotions as well as how to respond supportively to children in a way that promotes the development of emotional competence and reduces behaviour problems. We will present findings from three studies of the program: (1) an effectiveness trial with parents of preschool children; (2) an effectiveness trial with parents of primary school aged children with behaviour problems; and (3) an efficacy trial with parents of Grade six children. Learning objectives of this symposium include: understanding the contribution of parenting to children's emotional development; understanding the theoretical underpinning of the Tuning in to Kids program; awareness of the Tuning in to Kids program content, including emotion coaching and emotion regulation strategies for parents and children; knowing how the program may be adapted for children of different ages/developmental stages; awareness of some of the practical issues encountered when delivering the program in different settings.

Tuning in to kids: Theory and program overview

HAVIGHURST, S. (Mindful: Centre for Training and Research in Developmental Health, University of Melbourne)

Emotional competence, or emotional intelligence, as it is commonly known, is central to healthy child development and is significantly affected by the role that parents and carers play in helping children to understand, regulate, and appropriately express emotions. Parental emotion coaching (i.e., supportive responses, verbally labelling emotions, using empathy, and teaching children to understand and regulate their emotions), has been found to be central to the development of children's emotional competence. Parenting interventions have only recently started to address these causal links. The Tuning in to Kids program (Havighurst and Harley, 2007) aimed to target these emotion-focused aspects of parenting to improve emotional and behavioural outcomes for children. The mode of change involves parents attending to low/moderate intensity negative emotions and supporting, soothing, and helping the child to regulate the emotion so that when the emotional intensity lessens, the child can problem solve with support from the parent. Parents are also taught skills in becoming aware of and able to regulation their own emotions because parents' emotional functioning affects the emotion climate of the home as well as offering pivotal models for children about how to express and manage emotions. This first presentation will explain the theoretical model behind the Tuning in to Kids program and give an overview of the program content.

Keywords: emotional intelligence, parents, coaching, Tuning in to Kids program, emotion climate

Tuning in to Kids - A community effectiveness trial with a sample of preschool children and their parents

WILSON, K. (Mindful: Centre for Training and Research in Developmental Health, University of Melbourne)

The study aim was to evaluate the effectiveness of the Tuning in to Kids program (TIK) in a real-world setting, i.e. when delivered by staff from community agencies. We addressed two questions: (1) can real-world practitioners be successfully trained to deliver TIK with high fidelity (content and process)?

And (2) Are there significant improvements in parenting and child outcomes for TIK program participants? Preschools in the City of Knox were randomised into intervention and waitlist conditions, plus four practice preschools. Parents of children in 4-year old programs in 2009 were invited to participate in a TIK program. Practice preschools offered the program in term 1 (4 groups, 37 parents), intervention preschools in terms 2 or 3 (5 groups, 62 parents) and waitlist preschools in term 4 (7 groups, 68 parents). Parents completed Time 1 questionnaire booklets in February/March for waitlist and pre-program for intervention. Preschool teachers completed questionnaires for 124 children. Time 2 data was collected seven months later. Parent questionnaire booklets included psychometrically validated measures of child behavioural and emotional functioning, parenting and parent wellbeing. Teachers completed the Social Competence and Behavior Evaluation in Children (SCBE-30). Post-program qualitative data was collected from intervention parents and practitioners. Forty professionals from the City of Knox and local agencies attended one of two 2-day TIK facilitator training workshops. Training focused on theoretical principles underlying TIK and practising emotion coaching skills. Practitioners demonstrating an acceptable understanding of theory, emotion coaching and group process skills willing to make the required commitment to study protocol were selected for the trial; 26 practitioners co-facilitated at least one TIK group. Practitioner reflection, self-report measures and checklists were used to assess content and process fidelity. Content fidelity was high and process fidelity generally satisfactory. Post-program qualitative data was positive. Preliminary findings will be presented. Positive program evaluation by participants indicates that the TIK program can have successful outcomes in "the real world".

Keywords: community effectiveness trial, Tuning in to Kids program, children, parents, content fidelity

The effectiveness of Tuning in to Kids with primary school children with behaviour problems

HAVIGHURST, S. (Mindful: Centre for Training and Research in Developmental Health, University of Melbourne)

Tuning in to Kids is currently being evaluated in an effectiveness trial with primary school aged children with behaviour problems. The program is delivered by clinicians trained in the program as part of an early intervention service offered by the Child and Adolescent Mental Health Services (CAMHS) in partnership with Department of Education and Early Childhood Development and the Catholic Education Office schools. The CAMHS and Schools Early Action (CASEA) programs based at Austin and Bendigo Hospitals partnered with Mindful: Centre for Training and Research in Developmental Health at The University of Melbourne, to conduct this research trial. Schools in two locations, one a metro and one a regional/rural area, were randomly assigned into intervention or 12 month wait-list control conditions. All children in Prep to Grade 3 classes at the identified schools were screened for behaviour problems using a 7-item parent and teacher questionnaire. Those children scoring the highest 10-15% for behaviour problems were invited to participate in the early intervention program. The sample consisted of 93 intervention and 54 control children, their parents and teachers. The intervention included an eight week program for the child targeting social-emotional skills and an eight week Tuning in to Kids program for one of their parents. Teachers were also given assistance in how to manage children's challenging behaviours. Assessment was conducted at pre, post, 6 and 12 months follow up for the intervention group, and twice, twelve months apart for the control group. Preliminary results will be presented examining differences between the intervention and control participants on parent reports of parenting and child emotional and behavioural functioning. Participant evaluations suggest parents find the program useful in helping their child to understand and manage their emotions, and that it offers an important complement to changes made by the child. Additional conclusions will be drawn about the program's effectiveness in schools with children with behaviour problems.

Keywords: *Tuning in to Kids program, effectiveness research, children, behaviour problems, early intervention program*

Tuning in to Teens: Preliminary findings from a community efficacy trial with a sample of pre-adolescent children and their parents

KEHOE, C. (Mindful: Centre for Training and Research in Developmental Health, University of Melbourne)

Puberty has been associated with increases in mood variability, experience of negative emotionality and an increase in the intensity of negative emotions. The ability to recognize and effectively manage emotions during this time may be central for providing the protection and strengths to navigate the challenges of this period of development and protect adolescents from developing behavioural and emotional problems. Parents continue to be central in teaching young people these skills. Recent studies have found that emotion-focused aspects of parenting appear to be protective for adolescents during this period of development and may assist the young person to regulate and understand their emotions. This study investigated parent-child outcomes of a six-week group parenting program focused on promoting emotional competence in both parents and children. 110 schools from lower socioeconomic areas of the northern, western and eastern suburbs of Melbourne were randomised into either intervention (Tuning in to Teens Parenting Program), or control conditions (High School Transitions Questionnaire Study). 227 grade six students (aged 11-13 years; 126 intervention) and one of their parents/primary carers took part in the study. Of these, 126 intervention parents completed questionnaires at 3 time points, before and after the intervention and when their child was in Term 2 in their first year of secondary school. Control dyads completed the same questionnaire at the first and third time point. Preliminary results for pre-teen behavioural and emotional outcomes, parent emotion socialisation of their children, parent emotional wellbeing, and family functioning will be presented. Qualitative feedback from intervention parents showed parents found the program helped them improve emotional

communication in the family. Tuning in to Teens parenting program may offer an emotion-focused approach to strengthening parent-child connection and preventing behavioural and emotional difficulties during adolescence.

Keywords: puberty, mood, socialisation, emotional problems, Tuning in to Teens parenting program

Therapist-assisted e- Interventions

Participants' involvement and personal gains in online support groups

BARAK, A. (University of Haifa, Israeli)

Much evidence exists to support the success of online support groups (OSG) in reaching their goals. These findings, however, show that many online support groups' participants go through change processes but quite a few of them do not. Moreover, some studies and research reviews showed the lack of impact of OSGs in causing significant change in participants. These inconsistencies raise a question on the actual effectiveness of OSGs in providing mental help to their participants. The current presentation argues that there are possible moderators that interact with participation in OSGs which contribute to the inconsistent findings. Specifically, it is argued that participants' level of involvement is a key moderator in causing personal change. In order to test this hypothesis four studies were conducted. In the first study, 20 participants in an OSG for adolescents in severe emotional distress were followed up through their forum postings. Positive correlations were found between number of messages posted by participants and their emotional relief and suicidal thoughts. In the second study, positive correlations were found between number of messages posted and number of responses received and ratings of relationships with parents by 41 adolescents who participated in an OSG for adolescents experiencing problematic relationships with their parents. In the third study, positive correlations were found between number of messages posted and number of responses received and ratings of interpersonal relationships in 44 adolescents who participated in an OSG for adolescents experiencing social isolation. In the fourth study, level of involvement was compared among a helped, an un-helped, and a neutral group of participants (n = 20 in each) who took part in various OSGs. It was found that the

helped group posted more main and response messages, wrote longer, and used more emoticons than the two other groups. It was thus concluded that participants who are more active, involved, and engaged in OSGs are those who gain more from participation.

Keywords: online support groups, personal change, adolescents

How frequency and form of therapist support impacts on the effectiveness, user experience and accessibility of online mental health interventions

AUSTIN, D. (Swinburne University)

The aim of this study was to discuss findings from multiple randomised controlled trials and an open trial conducted by our research team on therapist-supported online interventions for panic disorder and post-traumatic stress disorder (PTSD). The results and conclusions from multiple trials have provided substantial evidence about the role of the therapist in improving the effectiveness, user experience and accessibility of online interventions. In our trials of therapist-supported online programs for panic disorder and PTSD, participants have reported a strong therapeutic alliance and a high level of satisfaction with the programs. A RCT found that an online intervention for panic disorder was just as effective in reducing panic severity and related psychological symptoms when participants received frequent emails (3 per week) as when they received infrequent emails (1 per week). Furthermore, the frequency of therapist contact made no difference to participants' perception of treatment credibility, satisfaction and their alliance with their therapist. Another RCT found that online intervention for panic disorder supported by psychologist-delivered emails was just as effective in reducing panic severity and related symptoms as the same online intervention supported by General Practitioners seeing users for face-to-face therapy. We have also found CBT for panic disorder delivered online to produce comparable outcomes to face-to-face CBT delivered by clinical psychologists. In an RCT, participants receiving online CBT had equivalent reductions in panic severity and related symptoms as face-to-face CBT, and

both types of delivery were rated equally credible and satisfying. Online interventions can be just as effectively accompanied by email-support from a psychologist as face-to-face support from a GP or psychologist. Further, online interventions can be successfully delivered with only 1 email contact per week from a therapist. Online-delivered CBT also compares favourably to face-to-face delivered CBT. Hence, online programs are a time and cost-efficient way to deliver best-practice mental health interventions and enable greater access to treatment than traditional delivery models.

Keywords: online interventions, panic disorder, post-traumatic stress disorder, cognitive behavioural therapy

Do we need a therapist: Evidence from recent RCTs of Internet-based treatment of depression and anxiety disorders from the VirtualClinic

TITOV, N. (University of New South Wales)

Depression and anxiety are common and disabling, yet only a minority of people with these conditions receive evidence based treatment. The emerging literature on Internet-based cognitive behavioural therapy (ICBT) programs indicate they can reduce barriers to accessing treatment, are associated with excellent and reliable clinical outcomes, and are acceptable to consumers. Dissemination of ICBT programs will be facilitated if their administration was less reliant on clinicians. Review of recent randomized controlled trials exploring the relative benefits of therapist vs. non-therapist ICBT for people with depression, generalized anxiety disorder, or social phobia, conducted at the VirtualClinic (www.virtualclinic.org.au). Participants who received non-therapist administered ICBT demonstrated adherence rates, obtained similar clinical outcomes, and reported the same levels of satisfaction as participants who received therapist-administered ICBT. The magnitude of clinical benefits is comparable to that obtained from good face to face treatment. Sophisticated ICBT programs can be successfully administered by non-therapists, under supervision by mental health professionals.

ICBT has the potential to increase the capacity of existing mental health services.

Keywords: *depression, anxiety, Internet-based intervention*

Time perspective: Explorations across cultures, ages and health related behaviours

Chair(s): MILFONT, T. (Victoria University of Wellington), FIEULAINÉ, N. (University of Lyon)

Discussant(s): VAN DE VIJVER, F. (Tilburg University)

Interaction with time is a fundamental characteristic of human experience, both objectively (defined by the clock) and subjectively (personal constructs of time). The relevance of the time perspective studies derives partly from the modern contradictory situation that has developed in many societies. From the global perspective, with the recent financial crisis in mind, we are witnessing drastic changes in the usual way of living and the collapse of modern economic relations that lead to changes in the relationship with time. Growing mobility of society as a whole also entails the possibility of change in temporal perspectives of the individual, as a result of changes in dynamics or by emergence of transitions from one pattern to another. Participants of the symposium are members of the International Research Network on Time Perspective and use a common tool in their research: the Zimbardo Time Perspective Inventory (ZTPI). Although several scales have been developed to measure time perspective, ZTPI seems to overcome most of the limitations of other measures by utilizing multi-item scales and by taking a multidimensional approach to time perspective (measuring five time frames: Past-Negative, Past-Positive, Present-Fatalistic, Present-Hedonistic, and Future). The aim of this symposium is to present new findings from research using the ZTPI across different cultural contexts and several research aims. The first presentation by Sircova A. will introduce a collaborative cross-cultural research project investigating the structural equivalence of the Zimbardo Time Perspective Inventory across 22 countries. Presentation two, by Fieulainé N. and Martínez F., will demonstrate the role of TP and desire of control in adolescents' substance use in France. The third presentation by Chistopolskaya K. will address the important issue of suicidal

behavior and its prevention in Russia. The fourth presentation by Earl J. will discuss developmental dynamics of TP in the Australian context. In the last presentation, Leite U. and colleagues will report findings from research linking time perspective with paranormal beliefs and irrational thinking. These presentations capture the variety and innovative nature of current research using the ZTPI, they address issues of measurement equivalence and also a variety of contexts the construct of time perspective is applicable.

ZTPI: Establishing equivalence across cultures

SIRCOVA, A. (Umea University)

The aims of this research project are twofold: 1) to explore the intercultural variations in person's time perspective and to ensure the comparability of research between countries; and 2) to establish equivalence of the available translations of the Zimbardo Time Perspective Inventory (ZTPI) and examine the specifics of an individual's time perspective in different cultural settings. The research questions are addressed through the collection of data obtained in each country that has conducted a language and culture adaptation of the ZTPI. Participants of the existing international network were invited to submit their ZTPI data for a comparative study. This resulted in data from 22 countries (Europe and worldwide), with an overall sample of 10,975 participants. To compare the factor structures of all versions of the ZTPI, exploratory factor analysis with subsequent Procrustes (Targeted) rotation was performed. Exploratory factor analysis was performed upon the aggregated weighted correlation matrix. The original five-factor structure of the ZTPI was supported. Both identity and proportionality coefficients were above .95 for the majority of the countries, suggesting that the factor composition was similar, and with the differences in factor structures resulting from different inter-factor correlations. The obtained results support the hypothesis that the temporal orientations viewed as personality traits are common among studied cultural groups. The implications of these cross-cultural findings for promoting a more valid and reliable

assessment of time perspective dimensions, as assessed by ZTPI, are discussed.

Keywords: intercultural variations, time perspective, Zimbardo Time Perspective Inventory, cultural settings, personality traits

Time perspective and substance use in adolescents: The buffering effect of desire for control

FIEULAIN, N. (University of Lyon)

While the predictive role of time perspective (TP) in substance use is well established, it remains to be seen how and when (or for whom) it occurs. In line with the framework of self-regulation theory, we examined how individual differences in desire for control moderated the relationship between TP and cannabis use. This study thus investigated the role of desire for control (DC) as a buffering factor in the impact of TP on cannabis use and evaluated the role played by this moderating effect in the predictive utility of the theory of planned behavior (TPB) as applied to cannabis use. Study was prospective in design, with DC, TP and TPB variables assessed at Time 1 and behavior measures taken 1 week later (Time 2). 690 high school students from an urban area in center France participated during normal class hours. DC was measured using Burger's Desire of Control Scale, TP was measured using a short version of the Zimbardo's Time Perspective Inventory (ZTPI) and cannabis use was self-reported using a multi-items measure. As expected, significant relations were found between TP and cannabis use. DC appeared to be only partially related to substance use. Interaction effects between TP and DC dimensions were predictive of cannabis use. Relation between TP and cannabis use appeared as buffered by DC in several ways. In relation with socioeconomic status (SES) indicators, results suggested how DC and TP interactions lead to vulnerability profiles, which can in turn act as pathways through which SES is related to substance use. Although this study confirms the utility of TP in predicting substance use, this relation appeared as conditioned by individual differences in DC. This last construct thus appears as worthy of interest in the analysis of substance use, and might help deepen

comprehension of the influence of TP over health behaviors. Moreover, results can be of use in improving health-promoting and risk-reducing interventions, and can be helpful in avoiding certain counterproductive effects linked to time-focused intervention. Implications for TP research and interventions designs will be discussed.

Keywords: time perspective, substance use, adolescents, desire for control, theory of planned behavior

Time perspective and attitudes to life and death of young people after recent suicidal attempt

CHISTOPOLSKAYA, K. (Moscow Research Institute of Psychiatry)

Different time perspectives correspond to different worldviews; some of them have been shown to be more strongly linked to well-being, and some – less. In this study we aimed to find out how these time perspectives are connected with attitudes toward life and death in young people after recent suicidal attempt. 32 people (age 18-25, 13 men, 19 women) after recent suicidal attempt (self-poisoning, 2-14 days) were asked to fill in the questionnaires: Zimbardo Time Perspective Inventory (ZTPI), Hardiness survey (Maddy), Death Attitude Profile-Revised (DAP-R; Wong, Reker, Gesser), Fear of Personal Death Scale (FPDS; Florian, Kravetz) and Depression Scale (Beck). Past Negative time perspective occurred to be positively correlated with attitude toward death characterized by Escape Acceptance (death as a relief from sufferings of life; DAP-R) and Depression, negatively correlated with fear of transcendental consequences of death (death as unknown; FPDS) and all dimensions of Hardiness Survey (Commitment, Control, Challenge, and Hardiness). Present Fatalistic time perspective was positively correlated with Approach Acceptance of death (belief in a happy afterlife), Escape Acceptance (DAP-R scales) and fear of forgetting (loss of social identity; FPDS), and negatively correlated with all dimensions of Hardiness Survey. Future time perspective was positively correlated with fears of consequences to personality (loss of abilities to think, feel, of wholeness of self), to

aspirations (self-fulfillment), to body (body decomposition) and transcendental consequences of death (FPDS); there was some positive link to Control scale from Hardiness Survey as well. Past Positive time perspective has shown moderate positive correlations with Fear scale (DAP-R), as well as fear of transcendental consequences of death (FPDS) and all dimensions of hardiness, and negatively correlated with Neutral Acceptance of death (as a natural phenomenon; DAP-R). Present Hedonistic time perspective occurred to be irrelevant to these variables in this sample. Past Negative and Present Fatalistic time perspectives play major role in attitudes toward life and death in acute postsuicide, while Past Positive and Future time perspectives may be viewed as defensive factors. Further research is needed to specify these findings.

Keywords: suicidal attempt, time perspective, attitudes, depression, personality

Exploring changes in time perspective across age and time

EARL, J. (University of New South Wales)

Zimbardo and Boyd (1999) promote the existence of five different time perspectives (TP): Future, Present-Fatalistic, Present-Hedonistic, Past-Negative and Past-Positive. The five factor structure proposed has been confirmed across multiple studies in more than 20 countries. It is not entirely clear how time perspective varies across age or across time. For example, while the test re-test validity reported by Zimbardo and Boyd (1999) were significant (0.70 – 0.80) these were reviewed after only over a four-week period. Research examining developmental changes in TP has been largely limited to Future TP. It has been proposed that people project further into the future as they move from childhood to adulthood. Understanding these age differences across all TPs, not only Future TP, is important if we are to assume that TP is relatively stable within individuals and across time. This study reports the results of a shortened version of the ZTPI (a) across two cohorts: university students ($N=347$; Mean age =20.14, $SD =4.72$) and retirees ($N=570$; Mean age =64.91, $SD =5.93$) (b) across time (6

months) within the younger cohort ($N=73$). From the first study we concluded that the student and retiree cohorts exhibited the largest differences on Past Negative and Future Time Perspective scores, whereby the younger cohort reported significantly *higher* Past Negative and *lower* Future TP compared to the retirees. In addition, the younger cohort reported a *higher* Present Hedonistic TP compared to the retirees. In the second study exploring differences within the younger cohort over a 6 month period, we found significant differences on Past Negative, and Present Hedonistic scores such that Past Negative scores *decreased* over time while Present Hedonistic scores *increased*. No other differences were found on other TP scores across the 6 month period, suggesting that these remained relatively stable. Findings suggest that Past Negative and Present Hedonistic scores may be subject to greater variations across time than the remaining three time perspectives.

Keywords: time perspective, age differences, five factor structure, validity, childhood

Belief in the paranormal, irrational thinking and its association with time perspective

LEITE, U. (Rio Verde University)

Time perspective has an overwhelming influence on people's lives and is an important psychological construct associated with various human aspects. On the other hand, paranormal beliefs and irrational thinking are held by the general population across different situations, and may lead to the development of maladaptive behaviors. Given the importance of time perspective, paranormal beliefs and irrational thinking, this study tries to understand their links. A total of 459 Brazilian participants took part in this study, with ages ranging from 13 to 84 years ($M = 20.57$, $SD = 14.93$), and the majority being female (63.6%) and Catholic (65.8%). Participants completed the following measures: Belief in the Paranormal Questionnaire (Vasconcelos & Tróccoli, 2004), Irrational Beliefs Questionnaire (Yoshida & Colugnati, 2006) and a Brazilian-Portuguese validated version of the ZTPI (Leite

& Pasquali, 2008; Milfont et al., 2008). Regarding the time perspective factors, the highest score was observed for Past-Positive ($M=3.47$, $SD=0.55$), followed by Future ($M=3.37$, $SD=0.44$), Past-Negative ($M=3.27$, $SD=0.57$), Present-Fatalistic ($M=3.18$, $SD=0.59$), and the lowest, Present-Hedonistic ($M=3.17$, $SD=0.55$). Three paranormal belief factors (paranormal beliefs, common superstitions and spiritual protection) were positively and significantly correlated to all five ZTPI factors, except for Future which was only significantly and negatively correlated to common superstitions. The fourth paranormal belief factor (evil vs. good) had no significant correlations with time perspective. Irrational beliefs was positively correlated with all five ZTPI factors (but Past-Negative), and also to three paranormal belief factors (common superstitions, spiritual protection, and evil vs. good). Statistically significant gender differences were also observed, with women scoring higher than men on Past-Negative, Past-Positive, Present-Fatalistic, and common superstition. The results confirm the prediction that the constructs are correlated, such that superstitious individuals also tend to hold irrational beliefs. And, more importantly, beliefs in the paranormal and irrational thinking were associated with more negative aspects of time perspective: fatalistic and hedonistic-present and past negative.

Keywords: time perspective, paranormal beliefs, irrational thinking, maladaptive behaviors, gender differences

Treating behavioural sleep disorders in children. A psychological perspective

Chair(s): BLUNDEN, S. (University of South Australia)

Discussant(s): LUSHINGTON, K. (University of South Australia)

This seminar will provide a basis for understanding the common sleep problems in normal children and families and how to recognise them and management strategies. This is aimed at practicing psychologists who work with children and adolescents. This symposium will: (1) Briefly describe normal and abnormal sleep in children; (2) Describe assessment and treatment of behavioural sleep disorders in children; (3) Describe the neuropsychological effects of behavioural sleep disorders in a group of 30 South Australian children; (4) Present data on pre, primary and high school samples of children with sleep disorders; (5) Present evidence of behavioural sleep treatments in children for nighttime waking; (6) Psychological treatments for sleep disorders in children with special needs. The key learning objectives are to understand: (1) The effects of normal and abnormal sleep patterns in children sleep patterns in children; (2) Assessment and diagnosis of behavioural sleep disorders in children; (3) Psychological techniques utilised in the treatment of behavioural sleep disorders in infants, school ages children and adolescents and in children with special needs. Psychologists are often seeing children in whom sleep is a major component of presentation and in many circumstances a clear management strategy will make significant impacts on child and parent functioning.

The neuropsychological and psychosocial effects of behavioural sleep problems in school ages children

BLUNDEN, S. (University of South Australia)

It is clear that the 2-15% of children with sleep disordered breathing (Snorers) show significant daytime deficits in memory, attention, cognitive function and behaviour. We aimed to evaluate whether the 30-40% of children with behavioural sleep problems (BSP) which are amenable to psychological treatments, also show these deficits. Families awaiting consultation for "sick" visits in five general practice clinics completed the Sleep Disturbance Scale for Children. A subset of children were categorized into groups: Snorers ($n = 11$), BSP ($n = 13$), Snorers + BSP ($n = 9$), and controls ($n = 31$). Children underwent psychological (Wechsler Abbreviated Scale of Intelligence, Children's Memory Scale; Test of Everyday Attention and Auditory Continuous Performance Test) and psychosocial assessment (Child Behavior Checklist). With analysis of variance, it was revealed that, compared with children in the BSP and control groups, those in the Snorers + BSP and Snorers groups showed reduced intelligence and attention scores. By contrast, compared with children in the Snorers and control groups, children in the Snorers + BSP and BSP groups reported reduced social competency, increased problematic behavior, and reduced memory scores. Children in the combination of Snorers + BSP group showed more deficits than children in all other groups. In children, snoring and BSP, separately and together, are associated with impaired neuropsychological and psychosocial functioning. Furthermore, each sleep disorder is related to performance in disparate ways. Snoring was associated with intelligence and attention deficits, whereas BSP was associated with memory and behavioral deficits. Psychologists should be aware that 30-40 % of children present with BSP, which is amenable to treatment using psychological techniques and behavior modification techniques that may reduce the impact on their daytime function.

Keywords: *sleep disorders, memory, attention, Sleep Disturbance Scale, children*

The frequency of sleep problems in Australian adolescents and the impact on academic and daytime functioning

LUSHINGTON, K. (University of South Australia)

Notably, the senior school years are characterized by high levels of parental expectation, demanding study regimens, and desire for success, all of which may mitigate against good sleep habits. Given the extensive literature demonstrating that sleep is important for learning, mood regulation, and effective social interaction in adolescents, the temptation to trade sleep for study may be counterproductive. However, our knowledge about sleep, study and well-being in Australian students is limited. The aim of the present symposium is to describe sleep, mood and stress in Australian adolescents and, in addition, to discuss the assessment and treatment of common adolescent sleep problems including: Delayed sleep phase syndrome, Sleep onset anxiety, and Study stress and sleep. Participating schools were recruited through the South Australian Science Teacher Annual Meeting. To date we have enrolled 353 Year 11 and 12 students aged 16-22years ($M = 269$ and $F = 84$) from six South Australian high schools. Students completed an omnibus questionnaire examining sleep behavior, sleep problems, mood, stress, coping, parental and child academic expectation, health, diet and activity. The results showed that only 25% of teenagers reported sufficient sleep on school nights [never 12.4/13.2 (male/female); rarely 32.2/30.0; sometimes 27.3/32.6; usually 22.3/22.0; and always 5.0/2.2%]. A relatively high number of teenagers also reported daytime sleepiness: with 3.2% falling asleep in conversation, 25% on a bus/train, 7% at the movies, 27% watching TV, 18% studying, 3% doing a test, 20% in class, 6% working on the computer, 5% playing video games and 20% reading a book. A relatively high percentage 16% went to sleep after 2am on school nights and 24% on weekend nights indicating delayed sleep patterns in a sizeable portion of children. This was significantly but modestly related to worse mood and increased stress (all $p < .05$). It was concluded that there exists a sizeable number of adolescent who have less than optimal sleep with consequent effects on their daytime functioning. Greater attention to sleep hygiene and managing sleep and study would be of benefit to students, families and schools. The treatment options for managing adolescent sleep problems need to be made

more widely disseminated and made accessible.

Keywords: *sleep habits, adolescents, sleep problems, sleep hygiene, sleep onset anxiety*

Behavioural sleep problems in special populations of children

HEUSSLER, H. (Mater Children's Hospital)

The aim of this study was to describe the psychological and family centered approach to a number of sleep problems in special populations of children including: ADHD, Autistic Disorders, Smith Magenis syndrome & other Developmental syndromes, and Cerebral Palsy. Pathophysiology and when to consider medical implications will be discussed. A description of typical problems found in each population will be presented from published literature and case reports. Current state of understanding will be presented. An approach to the child with developmental difficulty experiencing sleep difficulty will be explored. The rate of sleep disorders in these populations is between 30% and 85%. It is reported to contribute to added stress to families dealing with developmental and behavioural issues in these children. Each case report will present a particular issue and understanding of various special groups will be discussed (e.g. Smith Magenis syndrome and the relationships to complex clock mechanisms that impact on psychological and psychosocial functioning). Cases where early management needs additional medical orientation will be discussed. Complicated relationships often exist between medical frameworks and psychological implications. Early identification and management of sleep problems in these high risk populations can result in significant improvements in functioning in both child and family. A number of strategies have implications for specific disorders. A review of strategies for a number of special populations will be discussed.

Keywords: *sleep problems, children, attention deficit hyperactivity disorder, autism spectrum disorder, sleep problems*

The Sleepy Preschooler – Impacts on sociability, empathy and behaviour

MICHELL, B. (University of South Australia)

There is a large body of research that illustrates the impact of sleep on cognitive and affective functioning and negative behaviours including conduct disorder, aggressive behaviour and ADHD-like symptoms. Studies suggest that if sleep problems are addressed in this age cohort, negative behavioural outcomes problems improve. The trait of empathy, which utilises both affective and cognitive functions, has been linked to negative behaviours such as conduct disorder and aggressivity. This relationship may be mediated by sleep. This study therefore aims to investigate the link between sleep and the affective and cognitive components associated with empathy and sociability in preschool Australian children. Children, their parents, and their teachers from Child-Care Centres across Adelaide took part in this study (Children; $n = 37$). There were two phases of data collection. In Phase One, parents/caregivers and teachers completed questionnaires relating to the children and their behaviour and psycho-social functioning within their home and child-care environment respectively. Scales used included the Conner's Rating Scale, the Emotionality, Activity, and Sociability Temperament Survey for Children – Teacher and Parent Rating (EAS—T/P), Bryant's Index of Empathy for Children, Perspective-taking Subscale of the Interpersonal Reactivity Index (IRI), items from the Child Behaviour Checklist (CBCL), the Children's Sleep Habits Questionnaire (CSHQ), the Sleep Related Breathing Disordered Scale – Paediatric Sleep Questionnaire, and the Young Children's Empathy Measure. Phase Two involved actigraphy, wherein the children wore actigraphy watches to bed for 3-4 nights ($n = 24$). At the time of submission, analysis had not been concluded. However, the data will be considered using correlational methods initially to explore the relationship between sleep, behaviour, sociability and empathy. In addition sleep will be considered in terms of the validity of sleep diaries versus actigraphy. Between group analyses will be conducted to analyse the different effects variable lengths of sleep time have on empathy, behaviour and sociability. There are a range of psychosocial factors that influence child development and behaviour in preschoolers. Research is continuing to highlight the important role of

sleep in ensuring optimal development. Given that this preschool age cohort considered in this study is on the trajectory to begin school very soon, the importance of adequate sleep cannot be underestimated in terms of ensuring a smooth transition to school, and enhanced developmental opportunities. The findings from this study will be able to provide insight into typical sleeping patterns in preschoolers, the impact of napping vs. not-napping, differences in age, sex and sleep, and the other variables including empathy and sociability.

Keywords: sleep problems, conduct disorder, empathy, sociability, preschool

Treating insomnia in adults – what do psychologists need to know?

Chair(s): RAJARATNAM, S. (Monash University)

Presenter(s): ARMSTRONG, S. (Epworth Sleep Centre)

Psychologists have a great deal to offer the community in terms of treating sleep disorders such as insomnia. It is well recognized that non-pharmacological techniques such as CBT are safe and effective yet they are under-utilised. This symposium will provide a basis for understanding the evidence-based approaches to treating sleep problems non-pharmacologically. It will also incorporate the perspective of a psychiatrist who specializes in sleeping disorders. This symposium is aimed at practising psychologists who work with adults presenting with dysfunctional sleeping patterns such as insomnia. This symposium will: (1) Give an overview of common sleep disorders and the psychological components of these disorders; (2) Describe the ways in which the psychologist can assess and treat sleep disorders in adults; (3) Outline the common co-morbidities in insomnia; (4) Present data on the efficacy of CBT for insomnia; (5) Describe how behavioural factors including conditioning can maintain insomnia; (6) Describe how cognitive processes can maintain insomnia; (7) Present data on the efficacy of cognitive therapy for insomnia; (8) Discuss the limitations of medication in treating sleep disturbance; (9) Discuss the important role awaiting psychologists in the multidisciplinary treatment of sleep disorders. The key learning objectives are to understand: (1) The importance of sleep and the difficulties resulting from chronically disturbed sleep; (2) The prevalence of sleep disorders; (3) The physiology of sleep; (4) The circadian system and the importance of light therapy; (5) How to assess and diagnosis sleep disorders; (6) The psychological techniques utilised in the treatment of sleep disorders.

Sleep Disorders in Australia: a wake-up call for psychologists

ARMSTRONG, S. (Epworth Sleep Centre)

The aim of this study was to establish conclusively that sleep disorders are an important public-health problem in Australia as in other western countries and argue that psychologists should be taking a leading therapeutic role in their management. Instead, in Australia there is a dearth of interest and participation from psychologists. This speaker will give: (1) a brief classification of sleep disorders, then focus primarily on the insomnias; (2) an overview of prevalence, incidence, aetiology and risk factors; (3) an outline of the consequences, morbidities and co-morbidities associated with insomnia; (4) estimates of the public health burden; (5) evidence that the behavioural management of sleep disorders, particularly CBT have established efficacy. It will be highlighted that much more research is needed to standardize criteria for, and apply rigor to, such variables as diagnosis, severity, duration, effects and outcome measures. In Australia there is a need for a higher exposure to sleep and sleep disorders at all levels of tertiary training as well as in professional training for psychologists already in the workforce. To further this cause, the Australasian Sleep Association (ASA) in collaboration with the APS is preparing seminars and workshops for psychologists.

Keywords: sleep disorders, Insomnia, cognitive behavioural therapy, Australasian Sleep Association, health

CBT for insomnia and bright light therapy in a clinical population

LACK, L. (Flinders University)

In clinical research trials, cognitive/behavioural therapy has been shown to be effective for the treatment of chronic insomnia. We evaluated whether the effectiveness of these non-drug therapies could be translated from research to a typical clinical population of chronic insomnia sufferers. Over 300 consecutive referrals from GPs to the Insomnia Treatment Program administered by registered psychologists at the Adelaide Institute of Sleep Health were

evaluated. Co-morbidities of moderate psychiatric symptoms, other sleep disorders, and present pharmacotherapy were not excluded. The Program involved a home sleep recording, sleep education group session, and a series of five individual sessions including follow-ups at five weeks and three months after initiation of therapy. Components of therapy included well-established behavioural therapies (stimulus control and bedtime restriction), cognitive therapy (inappropriate beliefs about sleep and sleep/wake perceptual misjudgments), and bright light therapy when the insomnia was caused by circadian rhythm mis-timing. The different components received different emphases depending on the type of insomnia and estimated strengths of contributing causes in each particular client. Outcome measures included estimates of time taken to fall asleep, time awake overnight, total sleep time derived from sleep diaries, and various subjective measures of daytime functioning and feeling. There were very significant improvements from pre-treatment to both five-week and three-month follow-up in all sleep and daytime functioning measures with moderate to large effect sizes. The presence of other co-morbid sleep disorders (eg. Obstructive sleep apnoea) or elevated depression seemed not to impair the effectiveness of the treatment program for the sleep measures and, in the case of depression, showed reduced depressive symptoms. Chronic insomnia can be effectively treated in the typical clinical population by trained psychologists using a range of various non-drug therapies selected for their relevance in individual cases.

Keywords: sleep disorders, insomnia, cognitive behavioural therapy, comorbidity, sleep education

A description of a new Cognitive Therapy (CT) approach to understanding and treating chronic insomnia

REE, M. (Marian Centre)

There is no doubt that Cognitive Behaviour Therapy (CBT) for chronic insomnia is an effective treatment (Morin et al., 2006). There is, however, room for enhancement with the average overall improvement of 50–60% suggesting that only half of patients treated

with CBT become good sleepers (Morin, Culbert, & Schwartz, 1994). The aim of this paper is to describe the development and initial evaluation of a new treatment approach that was derived from a cognitive model of insomnia (Harvey, 2002). The model suggests that chronic insomnia is maintained by five cognitive processes operating both at night and during the day: (1) worry and rumination, (2) monitoring for sleep-related threat, (3) unhelpful beliefs about sleep, (4) misperception of sleep and daytime deficits and (5) the use of safety behaviours that maintain unhelpful beliefs. The aim of cognitive therapy (CT) for insomnia is to reverse all five maintaining processes during both the night and the day. In an open trial 19 patients meeting diagnostic criteria for primary insomnia were treated with cognitive therapy for insomnia. Assessments were completed pre-treatment, post-treatment and at three-, six- and 12-month follow-up. All patients were in the normal or mild range on the key outcome measure at post-treatment, with the pre to post treatment effect size being 5.17. No patient met diagnostic criteria for insomnia at post treatment. The significant improvement in both night-time and daytime impairment evident at the post-treatment assessment was retained up to the 12 month follow-up. The results suggest that cognitive therapy for insomnia is acceptable to patients, improves sleep, and improves daytime functioning. Overall, the results were strongest on measures of daytime functioning and moderate for measures derived from the sleep diary. The change in process measures across treatment suggest that the processes that cognitive therapy for insomnia set out to reverse do indeed appear to have reversed. In summary, preliminary results are encouraging, however, cognitive therapy for insomnia awaits evaluation in a controlled trial.

Keywords: cognitive behavioural therapy, insomnia, sleep, sleep diary, cognitive therapy

The role of medication in treating insomnia and the importance of collaborative relationships between psychologists and other health professionals

GRAY, C. (Psychiatrist, Brisbane)

The aim of this presentation is twofold: (1) educate the audience about the indications, contraindications, efficacy, and risks of hypnotic use in managing insomnia; (2) inform the audience about the potential role of psychiatry in the assessment and management of insomnia presentations in clinical practice. Results and findings from the available literature, such as meta-analyses, will be presented, and the speaker will highlight points of difference between the role of psychology and psychiatry in insomnia management. Reference will be made to the significance of the 4th National Mental Health Plan and the regulatory environment for health professionals. In general terms it is recognized that hypnotic medication is effective for short-term use in insomnia but that risks associated with hypnotic use may outweigh the benefits. Psychiatry has a definite role in the assessment and management of insomnia, along with psychology and primary care. The speaker will refer to case studies to highlight pharmacological and non-pharmacological pros and cons. Whilst hypnotics are effective for insomnia their utility is not universal and they carry risks, thus most treatment guidelines recommend CBT as the first-line of treatment. Psychiatrists and psychologists should strive to work together in managing insomnia disorders, whilst at the same time including GP's.

Keywords: insomnia, hypnotic medication, cognitive behavioural therapy

Trends in test development and use in countries with emerging test practices

Chair(s): ILIESCU, D. (SNSPA University Bucharest)

Discussant(s): OAKLAND, T. (College of Education, University of Florida)

Testing is possibly the most prominent contribution psychology has brought to the methodology of science. Tests are so severely packed into the methodological apparatus of psychologists that most psychological practice is inconceivable without tests. Still, tests are not evenly represented throughout the world and psychologists sometimes have to make do without tests, or without tests which would live up to professional and ethical standards. Testing, as represented in the scientific and professional community at this point of time, is a result of development efforts which are localized to a few developed countries. Most of the time, tests are then exported through a mere translation or through a more complex process of adaptation to other countries, populations and languages. Translations and adaptations are needed, as well as Indigenous development of measures. Different countries which registered a gap from this point of view have taken different approaches to test adaptation and indigenous test construction. The intention for the symposium is to bring together discussants who would share their insights and experiences about the status of psychological testing in countries which struggle with developing their practices and portfolio. Key learning objectives include the following: (1) To better understand the infrastructure that supports a coherent national approach to test adaptation and construction; (2) To better understand the cultural and professional situations where adaptation and indigenous construction would function differently; (3) To understand the impact of emerging technologies in testing upon different areas of the globe.

Test development and use in South-Eastern Europe

ILIESCU, D. (SNSPA University Bucharest)

Most countries in South-Eastern Europe have had a sad history of psychology during the communist regimes governing these countries from the 1940s to the 1990s; in some countries psychology was dismantled as an academic discipline. Major differences exist between this part of Europe and the Western part; these differences are not only quantitative (a smaller number of available measures) but also qualitative (testing practices, ethics etc.). Still, psychological testing advances in these countries are due to efforts from academic areas and from local test publishers. The study aims to evaluate the current status of testing and research on psychological assessment in countries from South-Eastern Europe. Countries involved in the study are Romania, Bulgaria, Ukraine, Hungary, Serbia, Croatia, and Slovenia. Semi-structured interviews were conducted with test publishers ($n = \sim 10$), academics ($n = 15$) and test users ($n = 30$) in these countries. A structured questionnaire was deployed online for data collection in the participating countries. A total of 400 respondents commented upon the development of test practices in their respective country. The data was integrated with the results of the Research run in the whole of Europe by the EFPA Standing Committee on Tests and Testing. The results of the study show the driving forces behind test development in the area of South-Eastern Europe, while also delineating possible threats. An interesting pattern of similarity between the participating countries has emerged, showing a preference for test adaptation and not for the development of indigenous measures, while the lack of professionalized users is one of the major threats to the further development of tests and testing in the respective societies.

Keywords: *psychological assessment, South-Eastern Europe, test development, test adaptation*

Developing an Indigenous personality test in the Rainbow Nation of South Africa

MEIRING, D. (University of Stellenbosch)

Most of the personality inventories employed in South Africa are imported from Western countries and usually administered in English. These measures show important limitations. The use of English-language instruments is problematic for participants with an insufficient mastery of English, especially for black groups. This study describes an approach to the development of culture-informed, psychometrically sound inventory. The study aims at the development of a new personality inventory for South Africa (South African Personality Inventory, SAPI), locally derived from Indigenous conceptions of personality in all 11 language groups. This project spans two stages: qualitative exploration and test development stage. Semi-structured interviews were conducted with 1,320 participants, equally distributed across the eleven language groups. A total of 52,000 person descriptive-terms were derived, which were prepared for analysis, categorized, and clustered towards 191 facets. In the second stage, a pool of scales tapping items, using a five-point Likert-type format was developed from the output of the first stage. Content analysis as method was used in evaluating the data of the first stage. The 191 total facets were clustered under 37 sub-clusters and nine overall clusters. These nine clusters were Extraversion, Soft-heartedness, Conscientiousness, Emotional stability, Intellect, Openness, Integrity, Relationship harmony, and Facilitating. Both a combination of classical test theory and item response theory were utilized in the test development stage of the SAPI project. There are no a priori expectations whether culturally specific facets would emerge or not; cultural differences either among the South African cultural groups or between them and Western groups are not hypothesized. Rather, the first stage of the project aims to explore Indigenous perceptions of personality as comprehensively as possible. The final inventory might have a core common structure and specific facets per group, or even have different structures in the different groups.

Keywords: *Personality inventory, Indigenous, Test development, South African Personality Inventory, South Africa*

The state of affairs of psychological testing in Japan

DE CARVALHO FILHO, M. K. (Kyoto University)

The aims of this talk are to critically evaluate the current status of Japanese testing and research on psychological assessment, to discuss some of the barriers to the dissemination of those tests inside the country and abroad, and to discuss what is being done in order to change the current state of affairs. Japan has a long history of Western-style assessment and has been among the first Asian societies to develop and test instruments using current psychological principles and analytic strategies. In the last few decades, Japanese psychological studies and psychological testing have evolved considerably and have developed features that are not present in those of Western countries. However, reality is that the great majority of the psychological tests used in the country is still imported and translated from the West, despite the efforts of many Japanese researches in developing original instruments in all different areas of psychology. Despite the great reliance on foreign instruments for testing, the growth of Psychology in Japan has witnessed not only an increase in the production of original tests for research purposes but also an increase in the research on the use of psychological assessment. Regardless of all the achievements and the improvement observed in Japanese psychological testing, very little of it seems to be acknowledged abroad. One of the barriers to the dissemination of these tests abroad is the language. The great majority of work done in Japan on psychological testing is written in the Japanese language. In order to incentive dissemination of Japanese psychological research and testing abroad, several measures are being implemented. For example, lately, public universities are giving special incentives for researchers and professors to engage in international collaboration and to disseminate their results in English rather than in the Japanese language. The development of psychological testing in Japan has enabled important questions to be asked about the validity of Western measures to assess the uniqueness of personality and psychological

attributes of Japanese individuals. This talk also intends to discuss some of these questions.

Keywords: psychological assessment, testing, psychological testing, dissemination, Japan

Development of psychological tests in Nigeria

MIVANYI, Y. (University of Lagos)

Testing, in psychology, like any other subject areas in Nigeria, is heavily foreign based. Most tests used by psychologists are adapted and are not necessarily used for their originally specified purposes. A few universities have test centers. Motivational level scales (MISS), socio-economic test batteries, embedded figures tests and psycho-educational research production are limited to school environment, less for industrial staff competence. The research in question surveys all the federal, state and private universities to establish categorical stock or psychological tests in diverse use in Nigeria, if any. This study fits well in time with the re-orientation in Nigerian education roadmap which unifies tertiary education entrance tests, including polytechnics (technology) college of education, being primarily teacher-training based. Follow-ups would include zonal and instructional seminars for enlightenment.

Keywords: testing, motivational level scales, socio-economic test batteries, psychological testing, Nigeria

Trust in organizations: A multi-level perspective

Chair(s): GILLESPIE, N. (University of Queensland)

Discussant(s): TAN, H. H. (Singapore Management University)

Trust is recognized as fundamental for effective leadership and organizational success. Research shows trust enhances creativity, communication and problem solving, fosters commitment and organizational citizenship behavior, and facilitates team and organizational performance (Dirks, 1999; Dirks and Ferrin, 2002; Mayer & Davis, 1999). Trust is understood to be a “meso” concept that integrates micro-level psychological processes and group dynamics with macro-level organizational and institutional forms (Rousseau, Sitkin, Burt & Camerer, 1998). Recent work identifies fundamental differences in trust processes at the organizational and interpersonal levels (Gillespie & Dietz, 2009). Yet little attention has been paid to the multi-level nature of trust. The aim of this symposium is to showcase emerging trust research at multiple organizational levels, to provide a forum to develop deep and rich insight into the nature and antecedents of trust across levels. Collectively, the papers examine trust in supervisor-subordinate dyads, newly-formed temporary teams, ongoing teams, and the organization. They employ a diversity of methods (e.g. quantitative and qualitative surveys, interviews, case analysis, conceptual work), and samples (e.g. US, Australia, Portugal, UK and 20 European countries), to examine a range of antecedents and moderators at the individual (e.g. propensity to trust, values, risk aversion, gender), dyadic (e.g. supervisor support), group (e.g. conflict, collective values, task interdependence, task complexity), and organizational levels (e.g. control systems, HR processes, senior management actions, training programs). The primary focus is on trust from the employee’s perspective. By drawing together researchers working at different levels of analysis, the symposium will address the following learning goals: (1) Develop a holistic understanding of the multi-level nature of

organizational trust; (2) Debate and critically reflect on the antecedents of employees’ trust in their supervisors, teams and organization, and how these may differ across levels and referents; (3) Identify practical insights into the role employees, team leaders, management and HR professionals play in building and repairing trust. The Discussant, an eminent researcher who has published on trust at various levels, will draw out insights and implications of the papers in relation to the learning objectives, and identify future research to advance an integrated understanding of organizational trust.

Trust between supervisors and subordinates: Antecedents and interaction effects on performance

GONZALEZ-MORALES, G. G. (University of Delaware)

Although there is an extensive literature on the benefits of developing trust-based relationships between managers and subordinates for both organizational and individual outcomes, very few studies actually looked at the viewpoint of both parties simultaneously. Due to their position in the organization, supervisors affect not only how employees interpret the organization’s actions, but also their decision to reciprocate. Recently Brower, Lester, Korsgaard & Dineen (2009) found that trust in manager only presented a significant relationship on individual-directed organizational citizenship behaviors (OCBs) when manager’s trust in subordinate was high. However, they did not find such interaction effects for organization-directed OCBs, in-role performance and intentions to quit. The present study aims to bring further evidence on the factors promoting trust in supervisor and the impact of mutual trust for organizational outcomes by: a) examining the interaction effect of trust in supervisor and trust in subordinate on subordinates’ in-role and extra-role performance; and b) examining the interaction effect of organizational cynicism and perceived supervisor support (PSS) on trust in supervisor. We collected data from 346 employees and their supervisors, from a variety of organizational settings. Job types included clerical, customer service, education, among others. Organizational size

included micro, small and medium enterprises (SMEs) and large organizations. All scales presented good reliabilities. Our results suggest that trust in supervisor has a positive relationship with both in-role and extra-role performance when trust in subordinate is high and a negative relationship when trust in subordinate is low. Additionally, we found that organizational cynicism presents a negative relationship with trust in supervisor when PSS is low, but not when PSS is high, suggesting that PSS buffers the negative relationship between organizational cynicism and trust in supervisor. These findings highlight the role played by supervisors for the employee-organization relationship: on the one hand, PSS buffers the negative relationship between organizational cynicism and trust in the supervisor; on the other hand, supervisors' trust in subordinate influences the strength and direction of the relationship between trust in supervisor and performance. Implications for researchers and practitioners will be discussed.

Keywords: trust, support, subordinates, supervisors, organizational citizenship behaviors

Trust in temporary work groups

KOEHLER, T. (University of Melbourne)

Members of Temporary Work Groups (TWGs) work together for a restricted amount of time to perform a complex common task (Sundstrom, De Meuse, & Futrell, 1990). Team members often have not worked together before and might not work together again for a while after task completion. Although trust is likely to be just as important for climate and performance in such groups (Meyerson, Weick, & Kramer, 1996; Zaccaro, Ardison, & Orvis, 2004), the traditional experiential determinants of trust are unlikely to be present. Trust must instead develop swiftly and from alternative sources (Meyerson et al., 1996). Though "swift trust" can be strong, it is likely to be more brittle than trust that is allowed to develop more slowly based on many displays of trustworthy behavior. The purpose of the current paper is twofold: 1) To establish the determinants of trust in TWGs and 2) to examine the factors that allow the initial trust in TWGs to develop into a less fickle

form of trust should the group remain together for a more extended period of time. Based on an extensive literature review and on interviews with leaders of TWGs in the United States Army, we developed a conceptual model of trust in TWGs identifying proximal and distal determinants, genesis over time, consequences, and situational and personal moderators. We considered whether trust in TWGs is qualitatively or quantitatively different from trust in more traditional groups. Dispositional variables of the trustor (e.g., propensity to trust or risk aversion), perceived trustee ability and benevolence, situational necessity for trust, task interdependence and task complexity/difficulty, role clarity, and mutual fate control were some of the proximal determinants of trust identified in the model. Distal determinants included information about previous training or employment, rank, and membership in professional organizations. Situational and personal moderators included previous experience with similar working conditions or the influence of early failures on trust building. Implications for team building, maintenance, and leadership for organizations from the suggested model include, but are not limited to, providing proxies for trust and installing systems of accountability. Further implications will be discussed at the conference.

Keywords: trust, temporary work groups, determinants of trust, teams, performance

The nexus between values, conflict and trust in teams

AYOKO, O. (University of Queensland)

Scholars acknowledge the importance of examining the link between conflict and trust (Ronson & Peterson, 2008). Yet, empirical evidence testing this link is understudied (Ayoko & Pekerti, 2008; Rispens, Greer & Jehn, 2007) while available studies are largely quantitative. In this paper, we build on the above research by qualitatively: 1) exploring values and conflict as antecedents of trust and, 2) investigating the role of team members' demography on the relationship between conflict and trust. We conducted 45 semi-structured interviews with team leaders and members in eight teams across two

organizations in Australia. Organization A is a small company involved in software development while Organization B is a large company involved in customer services, sales marketing and technical support. Interviews were audio-recorded and transcribed. Data were analyzed using NVivo software. Our qualitative data revealed some interesting results. First, participants indicated that individuals' personal values shape team values supporting the notion that values held at various levels of the organization are vertically linked (Roe & Ester, 1999). Secondly, our results showed that the effect of conflict on trust depends on the type of conflict, the team environment, the way the conflict is managed and the extent of congruity in employees' values. Specifically, respondents were of the view that cognitive rather than affective conflict has a positive impact on trust, while a climate of openness and transparency facilitates effective conflict management, which in turn, increases trust. Likewise, team members with similar values were more likely to trust each other. Finally and in terms of the role of employees' demography on the interplay between conflict and trust, our data showed that males (more than females) viewed conflict as beneficial to trust because conflict provides an opportunity to express views and clarify issues. Overall, our results suggest that individual values impact team values while team environment, conflict management, value congruity and gender moderate the connection between conflict and trust.

Keywords: trust, conflict, values, team environment, team values

Control as a driver of trust in the organization

DEN HARTOG, D. (University of Amsterdam)

During the last decade, a range of events have eroded both internal and external stakeholders' trust in companies. The current financial industry crisis and a number of scandals in firms have led to a call for an increase in regulations, and internal control systems from the government and the public. However, we know little about how these control systems affect employees' trust in the

company. Do such systems enhance employees' trust in the company or do such control systems erode trust? In the well developed literature on interpersonal trust that addresses trust between specific individuals, control is often proposed to have a negative relationship with trust, as controlling and monitoring behaviour signals distrust and enhances social distance (e.g. Lewicki, McAllister, & Bies, 1998; Sitkin & Roth, 1993). However, the role of control systems for trust in firms and other institutions is likely to differ from interpersonal trust because of the different types of power dynamics and vulnerabilities involved. We propose that control systems enhance trust at the organizational level as controls shift the power dynamics and vulnerability in favor of the employee. We applied a mixed-methods design. The relationship of control and trust was analyzed based on survey data of 787 employees of European firms. In parallel, we conducted a qualitative study of 62 additional employees to further analyze and understand the relationship between control systems and employee's trust in their company. Our quantitative analysis shows that output control, procedure control and sanctions are positively related to perceptions of organizational trustworthiness. The qualitative analysis demonstrates firstly that control is mentioned spontaneously and positively in regard to trust in the company. Secondly respondents relate control to trust in the company in two ways: a) the absence of control is seen negatively to promote a system of double standards and particularism; and b) the presence of control is seen as a signal of an organizations' benevolence and integrity. Overall, our results suggest that at the organizational level, control contributes positively to perceptions of trustworthiness. The implications for theory and practice are discussed.

Keywords: trust, financial industry crisis, employees, interpersonal trust, control systems

Repairing Trust in Organizations: A case study of the BBC

DIETZ, G. (Durham University)

Recent organizational failures have shaken stakeholders' trust of societal institutions (Edelman Trust Barometer, 2009). When an organization fails, the collapse in employees' trust can damage its capacity to function. Organizations need to work swiftly to repair trust. Yet the emerging literature on trust repair has focused almost exclusively at the dyadic level, and it is difficult to translate the prescriptions to the organizational level. Gillespie and Dietz (2009) recently proposed a systemic, multi-level framework for restoring organizational trust. This paper uses their four stage model and repair principles to analyse a recent case study of successful trust repair at the British Broadcasting Corporation (BBC). The BBC's integrity and commitment to excellent broadcasting is fundamental to its culture and brand. Yet, in July 2007, senior managers learned of a series of incidents during live phone-in competitions involving deliberate lying to the audience. The affected programs included children's programs and charity telethons. The ensuing public outcry led to huge fines and sanctions, and a massive internal trust repair effort. Using a retrospective case study method, we corroborate across primary and secondary data sources (e.g. all-staff internal emails, press releases, media interviews with key executives, internal investigation reports, and external news articles) to present a narrative of the failure, before analyzing the sequence and type of trust repair interventions, and their impact on BBC employees' perceptions of the organization's trustworthiness. Analysis revealed an extensive set of repair strategies including public acknowledgements of the failure, apologies by senior BBC representatives; internal and external diagnostic reviews (including investigation of millions of hours of broadcast); a mandatory training program on "Safeguarding Trust" for all staff, and new editorial guidelines. The reformative actions encompassed both 'distrust regulation' and 'trustworthiness demonstration' interventions, and the congruence principle. The BBC's trust repair efforts closely matched the Gillespie and Dietz (2009) framework, directly supporting several of the propositions. However, in seeking to restore the confidence of external stakeholders, the BBC introduced restrictive

editorial guidelines, antagonizing employees and potentially inhibiting their ability to perform their roles well. The implications for theory, applied psychological and management practice are discussed.

Keywords: trust, trust repair, organizational trust, organizational failures, BBC

Understanding and buffering the consequences of social inequality: Asian and Pacific perspectives

Chair(s): BERNARDO, A. (De La Salle University)

Discussant(s): YAMAGUCHI, S. (University of Tokyo)

Various indexes of social development refer to the development and wellbeing of individual members of society and to just and secure relationships among the diverse groups within society. In many Asian Pacific societies, there are social inequalities that impact on the attainment of these social development goals. The four papers in the symposium describe attempts to understand how social inequalities relate to developmental and social psychological processes in different ways. Ismail et al's paper focuses on an important social development goal in Malaysia -- the cognitive development of children -- and explores how poverty or economic strain may indirectly impede child cognitive development through its impact on maternal stress among three ethnic groups in Malaysia. Bernardo's study show how preference for conflict resolution procedures is influenced by social position within the hierarchical relationships between rich and poor in the Philippines; the rich more strongly prefer procedures that would allow them to exert their social dominance, whereas the poor more strongly prefer impartial procedures that would minimize the impact of social dominance. Hur's paper describes how the effects of educational development programs aimed to help the poor on South Korean students' emotion and learning vary depending on parenting styles. The paper focus on a indigenous emotional concept (Han) to raises issues on related to the efficacy of educational programs directed towards assisting the poor. Kashima and Meegan's paper assumes the negative effects of discrimination on well-being and examines how perceive group vitality enhances group self-esteem in the context of discrimination in Australia, thus indicating a way by which the negative effects of inequality may

be buffered by discriminated groups. The four studies that use various theoretical lenses and methodological approaches used in psychology all underscore how social inequalities within the societies in focus complicate societal development processes by showing its influence on social and developmental psychological processes. The final paper points to possible psychological qualities that may attenuate the negative effects of social inequality.

The relationship between poverty and maternal stress on child cognitive development

ISMAIL, R. (University of Malaysia Sabah), KHALID, N. M. (University of Malaysia Sabah), BAHARI, F. (University of Malaysia Sabah)

To determine the relationship between poverty and maternal stress on child cognitive development in a Malaysian sample. Participants were 212 mothers from low income families. The mothers come from three different ethnic groups: Bajau, Malay-Brunei, and Kadazan. All mothers had at least one child younger than 36 months who was free from any chronic disease. The mothers were surveyed using the three instruments (a) Bayley Scales of Infant Development II (BSID-II), (b) Economic Strain Questionnaire (ESQ), and (c) Parenting Stress Index (PSI). Significant relationships were found between economic strain, maternal stress and child cognitive development. Mother's personal characteristics, such as level of education and monthly income of the family were also significantly related with economic strain and maternal stress. Significant differences were also found in economic strain and maternal stress among the ethnic groups. There were also gender differences in aspect of mental development of the children by gender, and ethnic group differences on the aspect of behaviour development. The results indicate the impact of poverty or economic strain on maternal stress and child cognitive development, and how social factors like mother's education, gender, and ethnicity relates is related to these variables. Some implications for planning social development programs are discussed.

Keywords: *poverty, maternal stress, child cognitive development, education, ethnicity*

Conflict resolution amidst social inequality: Socioeconomic differences in preferred resolution procedures in the Philippines

BERNARDO, A. B. I. (De La Salle University)

A significant amount of research has demonstrated how societies have a tendency to form and maintain group-based hierarchies partly because of psychological tendencies for group prejudice, discriminatory behaviors, social roles and other social cognitive processes combine to maintain the inequalities and hierarchies between the groups. This tendency was studied among high- and low-socioeconomic status (SES) persons in the Philippines in relation to their preferences regarding conflict resolution procedures. It was hypothesized that compared to low SES persons, high SES persons would have a stronger preference for procedures that would allow them to exert their social dominance (bargaining & mediation) and weaker preference for impartial procedures that might attenuate their dominance (adjudication). 114 low-SES and 80 high-SES participants were presented hypothetical traffic-altercation scenarios where the SES of the driver and the pedestrian victim was manipulated in a 2 x 2 design. Participants were told to imagine they were the driver in the scenario and to rate and choose among four conflict resolution procedures: bargaining, mediation, inquisitorial or adversarial adjudication. They were also asked to explain their choices. As hypothesized high-SES participants preferred bargaining more strongly, and preferred the two forms of adjudication much less compared to low-SES participants. There were no group differences in preference for mediation; however, a significant interaction effect showed that high-SES participants rated mediation more favorably when the contending parties were of unequal SES, whereas the low-SES participants rated mediation more favorable when the parties were of equal SES. The results are discussed in terms of how various socially sanctioned forms of conflict resolution may be perceived by and opted for differently by

Filipinos based on their status in relations the dominant SES group in Philippine society.

Keywords: *group prejudice, discrimination, social roles, social cognitive processes, conflict resolution*

Is a high desire for education always beneficial? Bad education decisions of low social class parents

HUR, T. (Korea University), ZHANG, W. (Korea University), CHOI, S. (Korea University)

Education has been known to be one of the most effective and desirable ways to move from lower to higher social class in developing and even developed countries. So, in many countries including Korea, the governments and societies have tried to provide better and more opportunities for education to lower social classes. At the same time, almost all parents give priorities to their children's education over every other important aspects of their life. Even though with the good nature of high motivation for education, the motivation can and is also causing many negative phenomena, such as excessive expenditure for education at both social and individual levels, loss of diversity in career, etc. The psychological explanations of the negative outcome of the good motivation until now, however, remain rather speculative. The present study examined the various qualitatively various roots of high motivation for education and their impacts on parents' educational decision and behaviors. A survey with elementary, middle, and high school students and their parents has investigated the parents' own psychological experience of 'Han', regret, and learning effect in their own education and the impacts on their parenting styles. People reported to experience 'Han', a Korean indigenous emotion, when people had deprivation of education-opportunities, regret when they were given but did not utilize education-opportunities, and leaning effect when they experienced directly or indirectly successful utilization of education-opportunities. The results revealed that parents' negative emotions such as Han and regret were related with negative parenting styles, but the learning effects were related with positive parenting styles. Specifically, people who had experienced Han and regret

highly in their own education chose inefficient decisions for their children, and consequently their children reported more sufferings. Such results suggest that the extraordinary education motivation could be either beneficial or dysfunctional depending on its origins. The findings were discussed in terms of implications for how educational efforts for disadvantaged social classes could be truly beneficial.

Keywords: *education, social class, parenting styles*

The narrative of group vitality and its well-being benefits in the context of group-based discrimination

KASHIMA, E. (La Trobe University), MEEGAN, C. (La Trobe University)

Accumulated evidence suggests that being a target of discrimination imperils the individual's physical and psychological well-being. Recent social psychological research has highlighted the importance of group identification in coping with discrimination. For instance, according to the rejection-identification model, perceiving that discrimination against in-group is pervasive enhances group identification which in turn provides ingroup members with well-being benefits. Support for this model has been mixed, however, which may be due partly to the narrow conceptualization of group identification as self-group association. We propose a new concept of perceived group vitality, a narrative dimension of group identity conveying a set of associated beliefs that "despite our current low status and discrimination against our group, we as a group are making progresses and there will be no discrimination against our group in the future". We tested the well-being benefits of perceived group vitality and self-group association. In three studies, members of groups who are associated with discrimination in some contexts, namely lesbian women, women generally, and international students, were primed with a notion that discrimination against their group was either infrequent or pervasive. Perceived group vitality was measured by a questionnaire or manipulated with a written passage. Group identification was measured. Three well-being measures,

depressed affect, personal and collective self-esteem, were also measured. We found preliminary evidence to suggest that perceived group vitality not only correlates negatively with depressed affect and positively with collective self-esteem, but it also moderates the negative impact of perceived discrimination. Furthermore, the buffering effects of perceived group vitality were independent from effects of group identification and were more consistent. The well-being benefits of perceived group vitality supports the contention that the meanings people attach to the continuing experience of their ingroup can shape their psychological well-being at the face of adversity.

Keywords: *discrimination, well-being, group identification, coping, rejection-identification model*

Understanding the influence of contextual factors on pro-environmental behaviour and resident well-being

Chair(s): GIFFORD, R. (University of Victoria)

Discussant(s): RAYMOND, C. (University of South Australia)

Recent studies suggest that a shift in basic human values and environmental concerns has been occurring across Western society, which may play a role in increasing support for environmental policies and programs. Whilst significant research attention has been paid to the basic structure and content of human values and environmental concerns, new theories and measurement techniques are needed to better understand the range of contextual factors which influence pro-environmental behaviour and well-being at the place-specific and neighborhood scales. The key objective of this symposium is to examine new constructs and measurements techniques for understanding how context/setting influences pro-environmental behaviour and residential well-being. The symposium is guided by the question: What contextual factors should be considered in environmental policy and decision-making and how should they be measured? Presentations will be delivered around the concepts of place attachment, neighborhood condition and quality of life. Place attachment refers to the positive cognitive and affective bonds which develop between an individual and a place, neighborhood condition refers to the different parts of the local environment which affect human health, and quality of life refers to individual satisfaction with the residential environment (e.g., freedom, privacy). The symposium will then consider how the concept of 'regulatory fit' influences environmental protection. After the four presentations, we will discuss future directions for these areas of research, and how each area may influence support for environmental policies and programs in Western society. Additionally, we will identify

how these areas of research could inform the Millennium Assessment of Human Behaviour, as proposed by Paul Ehrlich.

The influence of human values and place attachment on the conservation of native vegetation

RAYMOND, C. (University of South Australia)

Australia has one of the highest extinction rates of native animal species in the world, which can partly be attributed to the extensive clearing of native vegetation on agricultural land. Little research or policy attention has been devoted to the contextual drivers of native vegetation conservation behaviour. In response, the aim of this study is to examine the relationships among human values, place attachment and native vegetation conservation behaviour in rural South Australia. It is hypothesized that those landholders who hold biospheric value orientations are more attached to place and are more likely to conserve native vegetation on private land. A postal survey was designed to measure human values, place attachments, environmental concerns, behavioural intentions and enduring native vegetation conservation behaviour. The survey was administered to 1,500 landholders in both the Eyre Peninsula and South Australian Murray-Darling Basin regions of South Australia using a modified Total Design Method. Rural landholders were firstly segmented into biospheric, altruistic or egoistic value orientations. Multiple regression analyses and structural equation modelling were then performed to test the relationships among value orientations, place attachments and vegetation conservation behaviour. Preliminary results indicate significant positive relationships among landholder value orientations, place attachments and enduring native vegetation conservation behaviour on private land. The role of place attachment in the design and delivery of policy instruments for the protection and restoration of native vegetation will be outlined. The implications of the results for the value-belief-norm theory will also be discussed.

Keywords: *native vegetation, conservation behaviour, attachment, agricultural, values*

Urban environmental stress: What do neighbourhood conditions do to residents and what do residents do to neighbourhood conditions?

HONOLD, J. (Humboldt Universitaet zu Berlin, Institute of Psychology - Cognitive Psychology)

Empirical evidence shows that urban environmental conditions such as air pollution, noise, population density or climatic factors may have impacts on the physical and psychological health of city dwellers. Among the few published studies addressing such effects on mental well-being, most have only investigated exposure to a single stressor. However, as suggested by literature on environmental stress, it is hypothesized that the accumulation of multiple ambient stressors is a key aspect of mental health consequences on a neighbourhood level. A geographical information system provided by an urban ecology research programme in Berlin was used to select socially and structurally comparable study sites with varying levels of critical environmental conditions (low vs. high). These environmental factors (traffic noise, air pollution, bioclimatic conditions and availability of public green space) had been determined by an online survey completed by 780 Berlin residents. A household questionnaire survey ($n = 420$) was conducted among residents of these sites and combined with more objective stress measures and qualitative interviews from a sub-sample. It is hypothesized that residents from neighbourhoods with a high level of critical conditions differ from residents living in low-level areas with respect to their mental well-being, their housing and life satisfaction. It is also investigated if perceived stressor and annoyance levels, individual coping styles and situational factors mediated, respectively moderated this relationship. In addition, psycho-physiological stress indicators are contrasted with self-rated well-being. Interview data provide information about action tendencies such as pro-environmental behaviour and neighbourhood participation. Health risks will be estimated from the main results. By linking quantitative outcome measures with qualitative interview data, possible feedback loops on objective

environmental conditions will be investigated. Interventions for education and sustainable city planning and development will be proposed.

Keywords: *urban environments, environmental stress, pro-environmental behaviour, sustainable city planning, mental well-being*

Quality of life in residential environments

PERLAVICIUTE, G. (University of Groningen)

A Quality of life (QoL) measure will be tested as an alternative instrument for assessing residential well-being. The applicability of the QoL measure will be tested with two questionnaire studies. In the first study, combined measures of importance and satisfaction allow distinguishing QoL aspects vital for satisfaction with residential environment (e.g. freedom, privacy), and identifying 'hot' residential issues in the neighborhoods of Groningen (The Netherlands) – namely important, but poorly satisfied QoL aspects (e.g. environmental quality, nature/biodiversity). In the second study, the effects of participation in residential decision making and surrounding nature on residential well-being are studied. Applicability of a multi-dimensional QoL measure to analyse residential well being is tested. Importance and satisfaction scores for each QoL aspect are combined to discover the most important predictors of residential well-being and to identify the directions for urgent housing interventions in Groningen. It is analyzed in depth how participation in residential decision making is related with the well-being of residents. With regard to surrounding nature, people's preferences for anthropocentric versus ecocentric greenery are studied. Advantages of applying a multi-faceted QoL measure in future environmental research are outlined. Implications and recommendations for policy-makers, builders, housing associations and developers are discussed to promote QoL of residents.

Keywords: *quality of life, residential well-being, residential environment, decision making, environmental research*

A tale of tailoring: Does regulatory fit increase messages persuasiveness?

Keywords: *regulatory fit, environmental messages, motivational orientation, climate change, attitudes*

LUCAS, S. (University of Groningen)

Marketing literature suggests that information is more persuasive when tailored to an individual's motivational orientation. For example, positively framed messages are more persuasive for promotion-focused people, while prevention-focused people are particularly persuaded by negatively framed messages; this principle is called regulatory fit. In our study, we examined whether regulatory fit enhances the effects of environmental messages. We argue that curtailment behaviour (e.g. reducing showering time) is conceptually linked to prevention goals, and thus should fit the motivational orientation of prevention-focused people, while efficiency behaviour (e.g. purchase of energy-efficient equipment) is linked to promotion goals, and thus should fit the motivational orientation of promotion-focused people. Thus, we hypothesized that regulatory fit between message content (efficiency vs. curtailment behaviour) and motivational orientation (promotion vs. prevention, respectively) increases persuasion. Additionally, we expected that regulatory fit results in more positive attitudes and behaviour in line with the message. We assessed the motivational orientation (prevention vs. promotion) of 203 first year students of the University of Victoria. Next, participants read a message on the preferred strategy (curtailment vs. efficiency) to combat climate change of a local, on-campus, 'green' organization. We measured the persuasiveness of the organization's message, attitudes towards the organization, and willingness to help the organization. An ANOVA showed that regulatory fit increased message persuasiveness; participants rated the message as more persuasive when the organization's preferred strategy (efficiency or curtailment) fit participants' motivational orientation (promotion or prevention, respectively). The effects on attitudes were marginally significant, while no significant effects on willingness to help the organization were found.

Unpacking relationships: Contexts, processes and outcomes

Chair(s): KARANTZAS, G. (Deakin University)

Discussant(s): WILKINSON, R. (CSIRO ICT Centre)

In this symposium we bring together four diverse papers that examine relationships from the perspectives of children, young and middle-aged adults, and present data using both the individual and dyad as the unit of analysis. The first paper by McGregor and Zimmer-Gembeck investigates how divorce, children's perceptions of parental conflict and the parent-child relationship predict children's optimistic and pessimistic relationship expectations. In the second paper, Webster and Fitness draw on an Emotion Focused Therapy approach in developing a measure of emotional signatures that can assist therapists in helping trauma survivors deal with relationship issues. In the third paper, Karantzas et al. propose and test a model of relationship functioning that includes key distal and proximal relationship factors known to influence relationship satisfaction. In the final paper, Cole and Karantzas, demonstrate how attachment style is linked to arthritis sufferers' coping tendencies and psychological adjustment. Three of the papers place varying degrees of emphasis on attachment style, highlighting the powerful insights that can be gained into relationships from an attachment theory perspective. While all the papers highlight the inherent complexity of relationships, they also illustrate how life events and relationship histories influence the development of the individual and shape relationship outcomes.

Divorce and family relationships as correlates of children's optimism and pessimism about their relationships

MCGREGOR, L. (Griffith University), ZIMMER-GEMBECK, M. (Griffith University)

Few studies have investigated whether children's familial relationship experiences and perceptions influence the degree to which they hold optimistic and pessimistic expectations about familial and non-familial relationships. Therefore, the aim of this study was to investigate whether divorce, children's perceptions of parental conflict and children's perceptions regarding the parent-child relationship were associated with optimistic and pessimistic relationship expectations. A total of 837 children (9 to 13 years) from four Australian schools completed child-specific measures of familial and non-familial relationship expectations, perceptions regarding parenting practices and parental conflict. Information regarding family structure (i.e., divorced or intact) was provided by the parents of the participating children. A series of regression models revealed that the parenting dimensions of maternal warmth and paternal autonomy support were significant predictors of optimistic non-familial relationship expectations, while maternal rejection was the only parenting dimension that predicted pessimistic non-familial relationship expectations. The parenting dimensions of maternal warmth, structure, autonomy support, and paternal rejection and coercion were all significant predictors of familial relationship expectations. Furthermore, children from divorced families had less optimistic family expectations than children from intact families. In closing, while family structure, and maternal and paternal parenting contributed to children's relationship expectations, children's perceptions of maternal warmth was the most robust predictor of optimistic familial and non-familial relationship expectations. Consequently, it is particularly important that mothers foster warm and loving relationship with their children to ensure that children maintain positive expectations regarding their relationships. Furthermore, the findings highlight that fathers who provide sensitive and responsive support to their children that fosters autonomy, also bolsters children's optimistic relationship expectations. These findings are important in understanding how children view relationships and can guide the development of programs aimed at enhancing positive parenting practices and cultivating

healthy relationship attitudes and beliefs in children.

Keywords: optimism, pessimistic expectations, relationships, parental conflict, parent-child relationship

Abandonment, annihilation, and attachment: The development of a psychological scale for identifying clients' emotional signatures.

WEBSTER, M. (Macquarie University), FITNESS, J. (Macquarie University)

It has been widely reported that individuals who experience either childhood and/or adult trauma display dysfunctional behaviours in relationships. In particular, the way individuals behave in response to their emotions, and their ways of relating to others, derive in part, from the kinds of traumas they have suffered. These clusters of behaviours are referred to as emotional signatures. However, to date, there exists no measure of emotional signatures which can be used by therapists in deciding on how best to assist trauma sufferers in dealing with relationship issues. Therefore, using an Emotion Focused Therapy (EFT) approach, the aim of the study was to develop a self-report measure of emotional signatures. Prior to the development of the self-report measure or emotional signatures, a large set of items pertaining to the two primary dimensions of trauma (abandonment and annihilation) were reviewed by senior trainers in EFT to identify the items that best captured the two trauma dimensions. This review process resulted in the development of the Emotional Signatures Scale (ESS), a 70-item self-report measure comprising the trauma domains of abandonment and annihilation. The ESS along with a childhood trauma questionnaire and a relationship attachment questionnaire were then administered to 62 participants ($M = 48$ years) comprising of students and therapists. Factor analysis of the ESS revealed two, highly reliable factors totaling 50 items. The first factor comprised 24 items describing thoughts, feelings and behaviours associated with abandonment, while the second factor comprised 26 items describing thoughts, feelings and behaviours associated with annihilation. Both factors were positively

associated with items from the Childhood Trauma Questionnaire. Furthermore, both ESS dimensions were significantly negatively associated with secure attachment and significantly positively associated with anxious attachment. The results of regression analyses, however, showed that although anxious attachment was a strong predictor of abandonment, annihilation was more strongly predicted by experiences of childhood abuse. Overall the results suggest that abandoned/neglected clients demonstrate relationship attitudes and behaviours characteristic of attachment anxiety, but that annihilated clients do not demonstrate any characteristic associated with attachment insecurity. Recommendations for further research on the ESS are discussed.

Keywords: trauma, dysfunctional behaviours, relationships, emotional signatures, Emotion focused therapy

The development of an integrative model of relationship functioning

KARANTZAS, G. (Deakin University), FEENEY, J. (University of Queensland), MCCABE, M. (Deakin University), GONCALVES, C. (Deakin University)

Industrialized western nations are currently experiencing high rates of relationship breakdown and divorce (Australian Bureau of Statistics, 2007; Bramlett & Mosher, 2002). Given the negative outcomes that accompany the dissolution of couple relationships, it is important to develop models that articulate the processes involved in maintaining healthy relationships, a call recently endorsed by Perlman and Duck (2006). Nevertheless, while research into expert and lay theories of relationships consistently demonstrate relationship functioning is multi-faceted in nature, few studies have attempted to develop integrative models to explain how relationship factors (i.e., attachment style, trust, intimacy, communication, partner support and relationship satisfaction) are associated and result in relationship outcomes. Therefore, the aim of this study was to develop an integrative model of relationship functioning. Data were collected from 75 cohabiting and married couples ($M = 39.30$ years) with a mean relationship duration of 15.04 years. All

participants completed questionnaire booklets that included self-report measures of attachment style, provisions of partner support, trust, intimacy, destructive conflict-centered communication and relationship satisfaction. The questionnaire took approximately 40 minutes to complete. A multi-group Actor Partner Interdependence Model revealed that the hypothesised model of relationship functioning was supported. Specifically, attachment style was associated with partner support and trust, while trust and the provision of partner support were associated with intimacy and destructive conflict-centred communication. In turn, intimacy was associated with relationship satisfaction. No gender differences were found across actor paths. However, analysis of partner effects revealed that men's provision of partner support influenced women's use of destructive conflict-centred communication. Furthermore, men's use of destructive conflict-centred communication was negatively associated with women's relationship satisfaction. In contrast, women's attachment insecurity was negatively associated with men's trust and provision of partner support. The integrative model of relationship functioning captures some of the most important relationship dynamics inherent in couple functioning. While no gender differences were found across actor paths, the partner effects highlight differences in relationship processes for men and women. Therefore, this model can inform relationship practitioners on how to best assist couples maintain fulfilling and satisfying relationships.

Keywords: relationship breakdown, divorce, relationship functioning, communication, relationship satisfaction

Coping and chronic illness: An attachment theory perspective

COLE, S. (Deakin University)

The relationship between coping strategies and the mental health outcomes of chronic illness sufferers is regarded as complex with studies reporting inconsistent findings. For instance, while some studies report that emotion-focused coping strategies lead to maladjustment and problem-focused coping

strategies buffer against maladjustment, other studies report the opposite trends. Furthermore, health professionals seem unclear as to the intra-individual factors that influence chronic illness sufferers coping tendencies. More recently, researchers have argued that these inconsistencies may be explained by attachment theory a theory of human bonding and, affect and distress regulation. Therefore, this research aimed to examine the differences in coping strategies employed by adults with a chronic illness from an attachment theory perspective. A total of 109 adults (19 males, 90 females) aged 18 to 55 years ($M = 32.2$ years, $SD = 10.7$ years) with a diagnosis of arthritis or arthritic-related illness participated in an online questionnaire which included measures of arthritis severity, attachment style, coping style and psychological adjustment. Using path analysis, arthritis severity was found to be positively associated with attachment, emotion-focused strategies associated with heightening distress (termed hyperactivating strategies), emotion-focused strategies associated with suppressing distress (termed deactivating strategies) and psychological adjustment. Furthermore, attachment was found to be significantly associated with coping and psychological adjustment. Specifically, attachment anxiety was associated with hyperactivating coping strategies and psychological adjustment, while attachment avoidance was associated with deactivating coping strategies. Finally, hyperactivating and deactivating coping strategies were associated with psychological adjustment. In contrast, constructive coping strategies (the use of problem-focused coping and support seeking) were not associated with psychological adjustment. The findings indicate that psychological adjustment to arthritis is associated with arthritis severity and the use of hyperactivation and deactivation emotion-focused coping strategies. Furthermore, the use of these coping strategies is associated with attachment insecurity and arthritis severity. The findings highlight the importance for therapists to consider an individual's attachment style alongside their coping strategies in assisting a person to deal with a chronic illness such as arthritis.

Keywords: *coping strategies, chronic illness, emotion focused therapy, attachment theory, psychological adjustment*

Upholding a clean and green image: Environmental psychology in Aotearoa/New Zealand

Chair(s): MILFONT, T. (Victoria University of Wellington)

Clean and green, and 100% pure. This is the way New Zealand markets itself to the international community, and the country is famous worldwide for this image. Indeed, the clean and green image is ingrained in people's views about the country. Research from the Ministry for the Environment has shown, for example, that consumers from three key export sectors (dairy products, tourism, and organic foods) from six different countries (Australia, Japan, Korea, Malaysia, the UK and US) would purchase substantially less if the environment of New Zealand was perceived as being degraded. Upholding a clean and green image thus has economic, social and environmental implications for the country. On the other hand, commentators and researchers have argued that this clean and green image does not correspond to the reality. In 2003 the ecological footprint for New Zealand was the sixth largest per capita among the OECD country members, and the per capita ecological footprint was also the sixth largest in 2005 for all nations with a population greater than 1 million. This symposium presents psychological research addressing environmental issues in New Zealand. A small (but growing) number of researchers are working in the environmental psychology field in the country. Showcasing environmental psychology research conducted in New Zealand to an international audience is the secondary objective of the symposium. Three papers will focus on specific environmental issues, including the role of emotion on transport mode, the role of identity on sustainable food consumption, and climate change beliefs. Two methodological papers will present the use of single-case research designs and action research for interventions designed to alter environmentally important behaviours. Despite the diverse

approaches and areas of emphasis, the presentations are inter-linked by a common goal to use psychological research to address environmental issues. All presentations are from a single country, but researchers come from four different institutions within New Zealand and three of the presenters are originally from other countries (Brazil, New Zealand, and The Netherlands). Attendees will have the opportunity to learn about both environmental psychology research conducted in New Zealand, and the use of psychological research to tackle environmental issues.

The role emotion plays in the choice of commuting by bike

WOO, T. (University of Canterbury), HELTON, W. (University of Canterbury), RUSSELL, P. (University of Canterbury)

We investigated the relationships between affect regarding cycling, the actual choice of commuting by bicycle, and support for pro-cycling policies. The present study was part of a larger ongoing study at the University of Canterbury in Christchurch New Zealand to determine the role of affect and attitudinal beliefs for personal transport choice. In the present study, 35 women and 18 men were asked to complete a questionnaire. This questionnaire consisted of a measure of bicycle affect, an attitudinal survey of the social, environment, and personal harm caused by automobile usage, a set of items assessing the extent of support for pro-cycling governmental policy, a set of items assessing cycle use, and some demographic items. Measured affect regarding cycling did not significantly correlate with support for pro-cycling policies; attitudinal beliefs about the personal and social harms of automobile use did correlate with support for pro-cycling policies. Attitude and affect did not appear to interact in regard to policy support. There was, however, a significant interaction between affect regarding cycling and participant gender when predicting actual amount of time spent using a bicycle. Positive affect towards cycling significantly related to riding time for men, $r = .56$, but not women, $r = .03$. This presents an intriguing result as women expressed greater support for pro-cycling policies and rated higher on the harm

due to automobiles questionnaire, whereas, men actually spent more time commuting by bicycle. While this is only a preliminary investigation in a larger ongoing project, the present findings indicate that the relationship between affect, attitude, and bicycle commuting is complicated by gender differences. As in previous studies, the men in our study generally expressed less pro-environmental beliefs and policy support than the women. However, those men with positive affective feeling towards biking did report riding more frequently than men without positive feelings. This was not the case with women. Marketing bike commuting may need to be considered in light of gender differences. For some users, a lofty pro-environmental message may not be as critical as expressing the directly experienced thrills associated with the activity.

Keywords: *emotions, cycling, transport, attitudes, gender differences*

Single-case research designs: Tools for 21stC environmental psychology

BLAMPIED, N. (University of Canterbury)

To illustrate from past and current research in environmental psychology the utility of a range of single-case research designs for evaluating interventions designed to alter environmentally consequential behaviours for individuals and groups, and to introduce an innovation in which single-case design principles can be applied to group interventions. The paper will explain the key methodologies of single-case designs, notably time-series single-case data, the use of baseline logic to identify experimental effects, visual analysis of experimental effects, and the use of replication to justify causal claims. Recent innovations extending these designs to group situations will be described. These employ scatter-plots for visual analysis of experimental effects, where data falling above or below the diagonal (zero change) line indicate intervention effects. Effect-size and other quantitative target information can also effectively be displayed. The paper will illustrate the successful use of single-case designs such as reversal and multiple-baseline designs as they have been applied in

environmental intervention research, and demonstrate these innovations for the analysis of group interventions. Single-case research designs are a useful tool to evaluate interventions designed to alter environmentally important behaviours both for single-case situations and where groups of individuals participate in the intervention.

Keywords: *environmental psychology, single-case research designs, environmentally friendly behaviour, group intervention*

Action research to promote a “sustainability culture” at a high school

HARRÉ, N. (University of Auckland), BLYTHE, C. (University of Auckland)

The New Zealand EnviroSchools experience has suggested it is harder to make sustainability progress at high schools than primary schools. The aim of this project was to promote a “sustainability culture” at one high school in Auckland, New Zealand. This was an action research project in which a university team worked alongside the school’s student environment leaders. We had five working principles derived from community psychology. First we worked with the *strengths* of the school, primarily the student leader team and the school’s reputation in the visual and performing arts; second we attempted to *empower* the young people, so they took ownership of the project and learnt about the process of creating sustainability; third we *role-modelled* sustainability practices; fourth we *measured* our progress and provided tailored *feedback* to the school; and finally we placed high priority on *communication*. The student leaders chose to focus on the creation of new waste stations that would allow better waste management and be a visual symbol of the school’s commitment to sustainability. The events included: a photography and mapping workshop showing the waste situation at the school, waste and litter audits, a competition to paint murals for the new waste stations, an eco-day to teach students about waste separation, and a film to demonstrate use of the new waste stations. The researchers took notes at all meetings and events, and conducted interviews with the members of the school community before and after the project.

All events were successful, being well attended and producing high quality artist outputs. The interviews also suggested the student leaders were empowered by the project and an emerging sustainability culture was evident from the post-project interviews with students and staff. The impact of the project on waste production and littering will be measured in early 2010. By working with a school’s strengths, role-modelling sustainability practices and measuring and communicating findings, considerable progress can be made towards encouraging a sustainability culture at a high school.

Keywords: *EnviroSchools, sustainability, environment leaders, empowerment, role-modelling*

Encouraging sustainable food consumption: the role of identity

ABRAHAMSE, W. (University of Otago)

There is an increased awareness of issues related to our daily food consumption. Meat consumption in particular has been linked to various environmental issues (e.g. climate change), as well as health risks (e.g. coronary disease). Tailored information is emerging as a fruitful approach to encourage consumers to adopt healthier and more environmentally friendly lifestyles. However, much less attention has been devoted to examining why such tailored approaches are effective. The paper aims to address this issue by examining the effectiveness of tailored versus non-tailored information about meat consumption and the role of identity. A questionnaire study was conducted ($N = 262$), using a 2x2 between-subjects design. Respondents either read a message about meat consumption that matched their identity as a meat eater, or that did not match their identity. Subsequently, respondents were asked to evaluate the information in terms of its persuasiveness, and they were asked about their attitude towards eating meat. The results indicate that attitude towards eating meat were most strongly related to identity, in that respondents who more strongly identified with being a meat eater also expressed more favourable attitudes towards eating meat. Health identity was

positively related to attitudes towards eating meat too. Additionally, respondents tended to evaluate information that matched certain characteristics of their self-concept (identification with being a meat eater) as more positively than when it was not matched. The results suggest that the identity concept plays an important role in the evaluation of information about meat consumption. Policy implications of these findings are discussed.

Keywords: awareness, food consumption, environmental issues, health risks, environmentally friendly behaviour

A national, longitudinal study of climate change beliefs in New Zealand

MILFONT, T. (Victoria University of Wellington)

Discussion of issues related to global warming and climate change are increasingly frequent in public discourse. A Gallup survey in the early 90s showed that the majority of lay persons in four of six nations rated "global warming" or the 'greenhouse' effect" as a very serious problem. A 2007 public opinion survey from Yale University also showed that 71% of the American public is convinced that global warming is happening. However, to our knowledge, no previous study has used a longitudinal design to examine people's beliefs and attitudes toward these issues. The objective of this longitudinal project was to understand New Zealanders' attitudes toward global warming and climate change. A nationally-representative list of 3,000 potential participants was randomly selected from the electoral roll, and a questionnaire packet was posted to participants. Wave I had a total of 581 valid questionnaires and was posted in June 2008. A second questionnaire was sent to Wave I participants about six months later (November 2008), and a total of 377 valid questionnaires were returned in this Wave II. The final questionnaire was posted one year after the first questionnaire (June 2009) and a total of 355 valid questionnaires were returned in Wave III. Participants were asked to indicate whether they agree with several statements, and consistent findings emerged across time. More than 60% of the participants believe that humans are responsible for global warming and climate change, and that their actions have

an influence on these issues. However, less than half believe that their actions to reduce the effects of global warming and climate change in their community could encourage others to reduce these effects through their own actions. Participants were also asked to indicate the trustworthiness of information on global warming and climate change provided by different media and groups. The most trusted groups were scientists, university academics and environmental groups, and the least trusted group was government agencies. Understanding possible consistency in people's beliefs about global warming and climate change has implications for climate change communication and for actions tackling denial and judgmental discounting. These implications will be discussed.

Keywords: climate change, global warming, greenhouse effect, attitudes, beliefs

What comes before leadership?

The role of motivation and career supportive leadership

Chair(s): KOREK, S. (University Leipzig), STIEHL, S. (University of Siegen)

Discussant(s): FELFE, J. (Helmut-Schmidt-University)

One important issue in leadership research is the investigation of personal and organizational preconditions which foster the striving for of a leadership position in the first place. This symposium will shed light on leadership motivation as a personal factor and on career supportive leadership behaviour as an organizational condition. In particular, the first two speeches give special attention to women's underrepresentation in high-hierarchy leadership positions. They investigate leadership motivation and the assumed gender differences in it, which have usually been used as an explanation for women's underrepresentation. The first contribution presents results of a qualitative research study in which 50 leaders were asked about their motivation to lead (MTL) and about appeals of leadership positions. Results showed concern for others and the organizational progress to be the most important appeal. No gender differences were shown in the self-reported motivation to lead. The second contribution presents the construction of a gender-sensitive instrument to assess leadership motivation. Two studies with a total of 1080 students and employees reveal the expected 3-factor structure (affective, calculative and social-normative) and – as expected – no gender differences. The third presentation focuses on research on personality and the motivation to lead, showing that a facet approach to measuring the Big Five yielded improved and more specific patterns of the relationships between the Big Five and the 3 factors of the motivation to lead construct. The final contribution will turn to an organizational factor: the assessment of leadership behaviours that are supportive to career advancement. They developed and tested an instrument with facets like delegation or trust which showed substantial

relationships with career-relevant outcomes. In conclusion, this symposium expands research on motivational and organizational conditions for leadership and career development and reveals that gender, personality and leadership behaviours are promising research fields. Furthermore, knowledge of motivational and personal preconditions or supportive leadership behaviour can be valuable to organizations to improve their leadership development.

The development of motivation to lead. An interview study.

STIEHL, S. (Helmut-Schmidt-University), GATZKA, M. (Helmut-Schmidt-University,), ELPRANA, G. (Helmut-Schmidt-University,), FELFE, J. (Helmut-Schmidt-University)

Women's underrepresentation in leadership positions is being discussed at large, but little research has addressed motivational differences in men and women striving for leadership. Prior to the construction of a new, gender sensitive instrument to measure motivation to lead (MTL) an interview study was conducted to test the plausibility of the following assumptions: (a) MTL is relevant in order to attain leadership positions (b) Male and female managers are equally motivated to take over leadership (c) Early indicators for MTL can be found in most leaders' biographies. (d) The power motive plays an important role in developing MTL. (e) We further explored which appeals of leadership positions are most relevant to managers. The semi-structured interview consisted of open questions (e.g. „Looking back in your history, would you say that you have always liked to be a leader?“) and ratings on 5-point-likert-scales The one-hour-interview was conducted with 29 men and 21 women in different leadership positions and branches throughout Germany. It was found that: (a) as expected, the majority of the managers (71%) found MTL to be important for attaining leadership; (b) Both male and female managers reported to have a rather strong MTL, confirming the relevance of a new, gender sensitive MTL measure, which contrasts the fact that the managers themselves believed in mid-sized motivational differences between men and women.; (c) biographical results are not entirely consistent, but many

leaders' biographies do show proof of early indicators for MTL, such as having shown steady commitment in sports clubs or church, however, others have realized their own potential rather late; (d) nearly all managers denied that exerting power over others was relevant to them, when asked explicitly, though they did insinuate a definite relevance for managers in general; (e) the majority of the managers further explained that taking over responsibility, a pronounced concern for others, as well as for the company's progress are the most relevant appeals of a leadership position. The results of the present study mirror the need for a new, gender sensitive measure for MTL, which should take into account biographical indicators as well as the appeals of leading positions. To detect hidden motives, e.g. power, a projective approach should be considered.

Keywords: *women's underrepresentation, leadership, motivation, gender differences, power*

Are women motivated to lead? Measuring motivation to lead from a gender perspective

ELPRANA, G. (Helmut-Schmidt-University), STIEHL, S. (Helmut-Schmidt-University), GATZKA, M. (Helmut-Schmidt-University), FELFE, J. (Helmut-Schmidt-University)

Women are underrepresented in leadership positions. Above all, in the past, social context reasons and gender typed socialization were used to explain the underrepresentation. Little attention has been given to motivational gender differences. So far, there seems to be some empirical evidence that women's MTL is in fact not as pronounced. However, these results are based on measures which were not designed to be gender sensitive. Therefore a new measure of MTL following a multimodal approach, including self-report, biographical, and situational items (5-point-likert-scales) was developed. The instrument includes leadership experience in the past, personal significance of the appeals of leading positions, occupational goal setting, self-rated competencies, and the 3 basic motives (power, affiliation, achievement). All constructs were based on the 3-dimensional conception of an affective, a non-calculative, and a social-

normative factor extending the instrument of Chan and Drasgow (2001). The Items were partially based on results of an interview study, undertaken with 49 male and female managers throughout Germany. For the first time, leadership motivation is also assessed from a projective angle, involving the evaluation of photography. In order to examine the psychometric properties and the validity of the new instrument two studies were conducted with a total of 1080 high school and university students, majoring in economics, social sciences and natural sciences, as well as employees from different branches and organizational levels. As expected, we confirmed the 3-dimensional factor structure of MTL, including an affective, a calculative, and a social-normative factor. Internal consistencies were medium to high. In contrast to previous measures, descriptive analyses showed equal means for both sexes, proving the gender sensitivity of the new MTL instrument. Practical implications of this instrument lie in the identification of one's own potential MTL which is likely to influence vocational choices. Differences in MTL between men and women in certain companies or branches can be analyzed in more detail. Risk and facilitating factors can be identified to improve equal job opportunities.

Keywords: *women's underrepresentation, leadership positions, motivations, gender differences, occupational goal setting*

Towards better understanding of personality and the motivation to lead: A facet-level study

CHAN, K. (Nanyang Technological University), CHERNYSHENKO, O. (Nanyang Technological University), HO, R. (Nanyang Technological University)

The aim is to report the findings of an empirical study conducted to examine the relationships between facets of the Big Five personality factors and the motivation to lead (MTL; Chan & Drasgow, 2001). The objective was to determine if facet level measures of the Big Five personality factors can provide a better understanding and prediction of the three factor-MTL construct over the Big Five personality factors. 249 undergraduate

psychology students completed facet-level measures of the Big Five personality factors derived from Stark, Drasgow & Chernyshenko's (2008) Tailored Adaptive Personality Assessment System (TAPAS) item pool and Chan & Drasgow's (2001) measure of MTL. Correlation and regression analyses showed that personality facets provided improved prediction of the MTL factors over the Big Five personality factors. More importantly, the facet-level data provided important insights on the specific relationships between personality antecedents and MTL. For example, we better appreciate the importance of dominance and sociability facets of extraversion as antecedents of affective-identity MTL while a combination of Dominance, Cooperation (facet of agreeableness) and Responsibility (facet of conscientiousness) act as antecedents to social-normative MTL. The original study by Chan & Drasgow (1999) did not report any significant relationship between Conscientiousness and non-calculative MTL. However, the present study using the TAPAS facets showed that combination of Virtue (facet of Conscientiousness) and Generosity (facet of Agreeableness) are related to Non-calculative MTL. This was possibly because of the improved content coverage of Conscientiousness in the TAPAS measure over that originally measured by Chan & Drasgow (2001) using the Big Five personality markers from the International Personality Item Pool generated by Goldberg which mainly consisted of the "Order" facet in the TAPAS. Advances in conceptualizing and measuring personality structure at the level of facets can provide important insights to the trait approach to leadership. Future leadership research should go beyond the Big Five factors to examine and better explain relationships between personality traits and different leadership outcomes at the facet-level.

Keywords: big five model of personality, motivation, leadership, conscientiousness, virtue

Career supportive leadership behaviour - construction and validation of a new instrument

KOREK, S. (University Leipzig), RIGOTTI, T. (University Leipzig)

Careers and taking leadership positions are contingent upon factors like career opportunities or motivation. The impact of leaders' behaviour for the career of their followers has rarely been investigated. Leaders play a relevant role, because they are responsible for assigning tasks with opportunities to learn leadership skills, promoting careers, and are relevant role models for their followers. Thus, the aim of this study is to develop and test an instrument for the assessment of career supportive leadership behaviours. Based on theoretical considerations as well as interviews with "high potentials", leaders, CEOs, and members of workers' council, an item pool of 74 items was constructed, covering 11 dimensions of career supportive leadership behaviours. An online study (N = 158) was conducted to test for factorial and construct validity of this instrument. After a sequence of factor and reliability analyses, five factors remained to assess career supportive leadership behaviour, namely delegating meaningful tasks (5 Items), trust (4 Items), flexibility (3 Items), social role clarity (9 Items), and direct promotion (8 Items). These factors could be confirmed in explorative as well as confirmative factor analyses, showing good model fit. Furthermore these leadership behaviours showed to be positively correlated to career relevant indicators like occupational self-efficacy, personal initiative, and career commitment. Additionally, evidence on incremental validity in relation to transformational leadership will be presented. The developed instrument to assess career supportive leadership behaviour proved to have good psychometric properties. Additional validation studies are conducted to further elaborate both the psychological construct, as well as the scales. But results of this first study are promising. Career supportive leadership might be an interesting tool for human resource management practitioners and organizational researchers alike.

Keywords: leadership positions, career opportunities, motivation, leadership style, role models

Whistleblowing at work: What we know and the way forward

Chair(s): MATTHIESEN, S. (University of Bergen)

The aim of the symposium is to strengthen the interaction and collaboration between whistleblowing researchers across nations to improve the practical implications of academic research. Whistleblowing concerns the reporting of wrongdoing at work, for example an unethical or illegal treatment regime, bribery or corruption, workplace harassment, or safety violations. Blowing the whistle has been regarded as a kind of prosocial behaviour, even though many of those who voice their concerns are met with aftermath reprisals. This symposium with five presentations from USA, Norway, South Korea, United Kingdom and Australia will focus on important knowledge research has provided us with thus far, and how we may proceed further in making the knowledge practically valuable. Presentation 1 will investigate whistleblowing from a legal perspective and will focus on how law and academic theory may be combined in order to be effective. Presentation 2 will outline conceptual challenges and problems associated with how academics measure and define whistleblowing, which in turn may effect the estimation of prevalence. The role of the complaint recipient is the topic of the third presentation. The relationship between personality and attitudes toward whistleblowing is the subject for presentation 4. In the 5th and last presentation findings from three empirical studies and a four year PhD research project on the antecedents and consequences of whistleblowing will be summarized.

U.S. approaches to and research on Whistleblowing

MOREHEAD DWORKIN, T. (Indiana University)

In an effort to reduce corporate wrongdoing, governmental regulations have increasingly focused on rewards to whistleblowers who report the wrongdoing as a mechanism for

detecting problems. In addition, the financial crises, both in the Enron era and the current one, have engendered a variety of laws and regulations to prevent recurrences. Unfortunately, recent studies show that the laws, particularly those without significant rewards, have not achieved their desired results. At the same time, researchers have looked at whistleblowing from a variety of theoretical perspectives including personality types (e.g., negative affectivity and proactivity), societal cultures, organizational environments, and reward effects, in order to build theories and models of effective whistleblowing policies. This report will examine the latest empirical studies and theories on whistleblowing, and examine the recent legislation including Sarbanes-Oxley and the TARP/False Claims Act. It will examine whether greater attention by legislators to the theoretical work would result in legislation that will achieve better results. Additionally, since significant rewards are not the norm outside the U.S., it will examine whether this approach might work elsewhere.

Keywords: *United States, whistleblowing, legislation*

The prevalence of whistleblowing - conceptual challenges

MATTHIESEN, S. (University of Bergen),
BJØRKELO, B. (University of Bergen)

The state of the art definition of whistleblowing was coined by Near and Miceli in 1985, and declares that whistleblowing is the disclosure by organization members (former or current) of illegal, immoral or illegitimate practices under the control of their employers, to persons or organizations that may be able to effect action. This is however a theoretical definition, and is not included as part of most previous whistleblowing survey questionnaires that have been distributed to various groups of employees. This in contrast to workplace bullying research, in which the respondents almost exclusively are given a well established definition of the bullying construct, prior to the question if they are exposed to it or not is addressed. In this respect, it should be mentioned that a recent meta study on workplace bullying by Nielsen, Matthiesen and

Einarsen (2009) demonstrated that respectively addressing or not addressing a definition for the respondents influences the prevalence rates of bullying consistently. Is this also the case in terms of whistleblowing? A national survey study of whistleblowing in Norway was carried out in 2008 (1604 participants). Within this, the prevalence of whistleblowing was mapped with and without a given definition. Contrary to the workplace bullying findings, our present study demonstrates that the prevalence rate of whistleblowing experience seems to be higher when a definition is given, as compared with the mapping without a definition. The presentation will discuss possible explanations for this finding. Whistleblowing as a social construct is also elaborated.

Keywords: *prevalence, definition, whistleblowing, social construct*

Next please! Or why we should focus our research on the whistle-receiver instead of on the whistle-blower

VANDEKERCKHOVE, W. (University of Greenwich Business School), TSAHURIDU, E. (RMIT University)

The past 30 years, research into the whistleblowing process has focused on the person blowing the whistle. Psychologists have been trying to find out what kind of people blow the whistle, and when. Ethicists have been worried about whether or not someone should blow the whistle, about how to solve a loyalty dilemma, and about what kinds of wrongdoing are wrong enough to blow the whistle. This scholarly work has had a major impact in how we generally think about whistleblowers. For example, we now know they are concerned about the legitimate well-being of their organization, and they raise their concerns inside before disclosing to an outside entity. Academic discussions about whistleblowing seem to forget two things; one is that there is a lot of successful whistleblowing where people raise a concern and that is taken seriously without any retaliation, and secondly, whistleblowing legislation often does not work precisely because the focus is not on the message but on whether or not the whistleblower has followed

the right procedure and hence is entitled to protection. This calls for a shift in research focus away from the person blowing the whistle towards the person to whom the whistleblower raises their concern. They are key actors when it comes to 1) the concern being taken seriously, 2) keeping the process free of retaliation. This paper offers by way of meta-analysis: 1) that trying to predict who will blow the whistle is hopeless, 2) that ethicists focusing on moral dilemmas of whistleblowers are missing the point. This paper builds on that to offer the argument that the ethical questions are with regard to the whistle-receiving person, not the whistle-blowing person. We offer a meta-analysis of very recent research in support of our argument. We also point out a number of research questions that would flesh out that research stream.

Keywords: *whistle-receiver, whistleblowing, loyalty*

Relationship between personality types and attitudes toward whistleblowing

PARK, H. (Chung-Ang University), PARK, M. (Chung-Ang University), BLENKINSOPP, J. (Teesside University)

This study examines the relationship between personality types and attitudes toward whistleblowing. Personality type has been identified as a major influence on individuals' attitudes, behavior, and communication styles, but few researchers have empirically tested the relationship between personality type and attitudes towards whistleblowing. The study sought to address the following key questions. What role does personality type play in determining attitudes toward whistleblowing? What type of personality is most closely related with positive attitudes towards whistleblowing? And what portion of the variation in attitude does personality type explain? Based on a review of the literature we generated several hypotheses as to the nature of the relationship between personality type and attitudes towards whistleblowing, and these were tested using data collected from university students in South Korea on an ongoing basis since March 2008. The survey instrument comprised two parts, a measure of personality type based on MBTI, and a section

assessing attitudes towards whistleblowing. Data gathering will be completed in December 2009, and the final sample will be over 400. ANOVA and regression analysis will be conducted to clarify the relationship among the variables, focusing on the effects of personality types on attitudes towards whistleblowing. This study offers two main contributions; firstly, it assesses what role personality types play in forming attitudes towards whistleblowing, while improving our understanding of the relationship between personality types and attitudes towards whistleblowing, and secondly, it provides insights for designing training programs aiming at nurturing ethical attitudes in an organization.

Keywords: *whistleblowing, personality types, attitudes*

Whistleblowing: antecedents and consequences

BJØRKELO, B. (University of Bergen)

This is a presentation of a four year PhD research project (2006-2010) about the antecedents and consequences of whistleblowing. First of all the research project shows that few employees blow the whistle and that most self-reported actual whistleblowers report internally and is relatively successful in terms of effecting change regarding the reported wrongdoing. On average whistleblowers report low levels of retaliation while they simultaneously report less job satisfaction and more bullying at work than their non-reporting colleagues. It is therefore needless for management to fear massive hordes of whistleblowers. Whistleblowers ask for more information about action taken by management after they have reported. Secondly, the results show that employed self-reported actual whistleblowers may be characterised by high extraversion and dominance and low agreeableness in social interaction. Thirdly, the results showed that a U.S. model of whistleblowing, developed by Donald Soeken, was valuable when analysing a Norwegian whistleblowing case. Further, repeated, long lasting retaliation that made the whistleblower in this case unable to defend himself could be defined as workplace bullying.

The consequences on health and wellbeing were severe, and included posttraumatic stress analogue symptoms. Characteristics of the situation, leadership style and type of organisation could have influenced the whistleblowing process. In addition to presenting the overall findings from the research project the presentation will also outline practical and clinical implications and academic challenges for future research in this field.

Keywords: *whistleblowing, antecedents, consequences, post-traumatic stress disorder*

Workplace bullying and harassment: Incidence, consequences and solutions

Chair(s): BROUGH, P. (Griffith University)

This symposium focuses on the impact of two major types of anti-social behaviour in the work environment – bullying and harassment. These phenomena have received increasing attention in the organizational psychology literature in recent times, and are recognized as having substantial consequences for the health and well-being of workers, along with their work performance. It has also been recognized that there are serious implications of these anti-social behaviours for the overall productivity of organizations, as well as their reputation. Hence an understanding of (a) the nature of bullying and harassment, (b) their potential consequences, and (c) strategies for dealing with these counterproductive behaviours at work, is essential for changing work environments so that they are more conducive to employee psycho-social health and well-being. Management of anti-social and counterproductive behaviours is a key theme underlying the papers in this symposium. The symposium includes four presentations, two from a major study of bullying and stress in New Zealand organizations, and two from a nationally-funded investigation of stress and well-being within the Australian corrections industry. Following the four specific presentations, there will be a general discussion of the implications of the overall findings for the effective management and reduction of bullying and harassment in organizational settings. The key learning objectives of this symposium are: (1) Developing an understanding of the nature of work-related bullying and harassment behaviours; (2) Examining the psycho-social impact of bullying and harassment on individuals at work; (3) Reflecting on the effectiveness of personal efforts to reduce workplace bullying and harassment; (4) Considering the role of managerial and organizational initiatives to

manage anti-social behaviours and their aftermath.

Bullying and stress in New Zealand organisations: The effectiveness of personal coping efforts

O'DRISCOLL, M. (University of Waikato)

The aims of this study were to explore the occurrence of workplace bullying and psychological strain in New Zealand organisations; to assess the relationship between bullying and psycho-social outcomes, including strain and overall well-being; to examine the effectiveness of targets' personal efforts to cope with bullying and its consequences. This study represents the first systematic attempt to evaluate the incidence of workplace bullying in New Zealand. An online survey was conducted of employees ($N = 1608$) from 36 organisations in New Zealand. Bullying experiences were assessed via the revised 22-item Negative Acts Questionnaire (Hauge, Skogstad & Einarsen, 2007), along with a single item asking whether individuals felt that they had been bullied over the past six months. Psychological strain was measured with the 12-item General Health Questionnaire (Goldberg, 1972), and overall well-being with Warr's (1990) 15-item adjective checklist. Three types of personal coping strategy were also assessed: problem-focused coping (4 items), selective coping (4 items) and resigned coping (2 items). Coping items were taken from the Copenhagen Psychosocial Questionnaire (Kristensen & Borg, no date). Other variables measured in the survey included: affective organisational commitment (6 items), turnover intentions (3 items) and self-reported absenteeism (1 item). Based on the criterion of experiencing at least two negative acts per week over the previous 6 months, the incidence rate for bullying in our sample was 17.8%. The NAQ and self-reported bullying were significantly inter-correlated ($r = .62$). Bullying was correlated with strain (.55), well-being (-.60), affective commitment (-.36), turnover intentions (.48) and absenteeism (.26). Personal coping strategies were generally unrelated to other variables. The reported rate of workplace bullying was somewhat higher in this research than that

reported in other international studies, and bullying was clearly associated with a range of negative outcomes, including heightened strain and reduced well-being. Personal coping efforts appeared to be ineffective in alleviating the negative impact of bullying, suggesting that more systemic organisational interventions may be necessary to reduce the incidence and aftermath of workplace bullying. The importance of proactive managerial intervention, and a focus on work environment factors which may alleviate bullying behaviours, will be discussed.

Keywords: *bullying, stress, coping, bullying, environmental factors*

Bullying in healthcare settings: Why is it happening, and what is being done by organisations?

COOPER-THOMAS, H. (University of Auckland)

Employees in healthcare settings typically report high levels of bullying relative to other industries. Our research aims were to investigate bullying among healthcare employees in New Zealand, examine potential antecedents and consequences of bullying, and assess organizational initiatives designed to reduce or eliminate bullying. Data were gathered using the Survey of Work and Wellness. A total of 727 participants across nine healthcare organisations responded to a range of measures, including the Revised Negative Acts Questionnaire (NAQ-R; Hauge, Skogstad & Einarsen, 2007) and the General Health Questionnaire (GHQ; Goldberg, 1972). Respondents were also asked their perceptions of the effectiveness of 13 different organisational strategies to combat bullying. Participants reported bullying behaviours at the high end but within international norms (18.4% at least weekly for two or more items on the NAQ-R). Those experiencing bullying reported a poorer work environment, in terms of work climate, organisational support, supervisor support, and colleague support. These targets of bullying also reported worse experiences of work, including lower performance and emotional wellbeing, and higher levels of strain and turnover intentions. Targets also considered organizational strategies for dealing with bullying as less

effective. However, the effectiveness of organisational strategies overall was significantly associated with lower bullying, strain, and turnover intention, and greater wellbeing. For those experiencing high levels of bullying, they rated “developing a workplace bullying policy” as the most effective organisational strategy, although all organisational strategies to address bullying had mean scores in the ineffective range (“very ineffective”, “ineffective”, or “somewhat ineffective”). Our results confirm the organizational-level antecedents of bullying (e.g., poor leadership) and the negative consequences for individuals and organisations (e.g., poorer performance). The picture with regard to the effectiveness of organisational strategies is mixed. While perceiving organisational strategies as more effective is associated with better outcomes, targets of bullying perceive all organisational strategies as ineffective. These results highlight the ethical and practical imperative of finding more successful approaches for dealing with workplace bullying behaviour.

Keywords: *bullying, health care services, healthcare employees, workplace bullying, work environment*

“This is the culture you are working in – you are supposed to be tough!” A case-study of harassment and bullying in corrections

BIGGS, A. (Griffith University)

Correctional workers experience a high degree of exposure to workplace aggression while working in a dominant masculine culture. The purpose of this study was to investigate the impact of harassment and bullying upon levels of burnout and job engagement reported by a sample of Australian correctional officers. Both qualitative and quantitative methods were employed to identify issues surrounding the existence and reporting of workplace bullying. This paper presents results self-reported by 324 Australian Correctional Officers. The results showed that harassment significantly mediated relationships between work characteristics and burnout and engagement. Supervisor harassment was the strongest predictor of work-related burnout, and

engagement; co-worker harassment was the most significant predictor of personal burnout; and offender harassment was the most significant predictor of burnout. No moderating effects for gender were observed. Qualitative feedback identified five key issues: (1) Harassment and bullying policies are ineffective if not genuinely supported by organisational members; (2) Awareness of bullying has reduced occurrences of overt and ritualistic bullying, but has had less impact on covert bullying; (3) Mistrust, lack of communication, and breakdown of community exacerbate bullying and harassment; (4) Bullying and harassment complaints are typically made after the situation has escalated beyond a point where resolution is possible; and (5) A definite stigma is still attached to bullying and harassment complaints within a 'tough' culture. This research demonstrates the importance of the organisational context in bullying and suggests that inadequate support for policies and lack of equity may be as damaging as the actual bullying experience. A number of implications for organisational-level intervention strategies are discussed, which also addresses a major criticism that intervention strategies are limited due to an individual-level focus. Finally, this research demonstrated that harassment/bullying from co-workers more significantly impacted perceptions of well-being than manipulation or harassment from offenders.

Keywords: correctional workers, workplace aggression, bullying, harassment, burnout

The long-term implications of co-worker initiated harassment and bullying

BROUGH, P. (Griffith University)

Workplace aggression comprises a wide range of counter-productive workplace behaviours, including harassment, bullying, incivility, mobbing, and hostility. Despite the existence of substantial research focusing on workplace aggression, theoretical and empirical development has been impeded by a number of limitations associated with this literature. For instance, research has focused on individual-level predictors of aggression, neglecting the wider role of the organizational context; there has been a lack of agreement as

to whether aggression sits within the stressor-strain framework; and research has overwhelmingly adopted cross-sectional methodologies. Within these limitations in mind, this research investigated longitudinal relationships amongst harassment/bullying, job demands, work-related social support, job control, turnover intentions, engagement, and work-related burnout. The research employed a repeated-measures, cross-lagged design, with a time-lag of six months. Longitudinal analysis was conducted with structural equation modeling. The sample consisted of 324 employees from an Australian State Corrections Department. Invariance testing indicated that the factor structure of the model was invariant across the two phases of research, which increases the validity of the longitudinal results. The results indicated that Time One demands, control, supervisor support, equal opportunities, and mentoring predicted Time One harassment/bullying from managers. Plus Time One demands, control, and equal opportunities predicted Time One harassment/bullying from co-workers. Furthermore, harassment/bullying from managers predicted job satisfaction, equal opportunities, mentoring, and supervisor support over a period of six months. However, harassment/bullying from colleagues did not predict any outcomes over a period of six months. Time One harassment/bullying from managers also mediated many of the relationships between Time One work characteristics and Time Two outcomes. In addition, the potential moderating effect of social support and a culture that promotes gender equity were also evaluated. Although cross-sectional moderating effects were demonstrated, these were not maintained over-time. This research demonstrated the importance of considering alternative forms of causation; the longitudinal impact of harassment on well-being outcomes; the greater effect of harassment from managers on outcomes; and the impact of work-related variables on harassment and bullying.

Keywords: bullying, harassment, workplace aggression, equal opportunities, social support

Young career researchers present: Critical perspectives on postmodern career concepts

Chair(s): DRIES, N. (Vrije Universiteit Brussel)

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This symposium focuses on postmodern careers and, more specifically, on “hyped” concepts such as boundaryless and protean careers. While boundaryless careers imply not being bounded to a single organization, domain or specific career path, protean careers highlight freedom, self-direction and personal choice. Postmodern career theory advocates two assumptions: first, that most individuals nowadays follow non-linear, unpredictable career paths inadequately explained by existing models of career development; and second, that more and more people are thinking like “free agents”, and consequently, traditional career types are no longer wanted by employees. However, both assumptions are contradicted by recent studies. Reservations have been raised about the portability of the above assumptions beyond the US, the cultural importance people attribute to security and the syndicalization of organizations being at the heart of the discussion. Promotions, long-term loyalty, job security, upward mobility and material success are still greatly valued by employees worldwide. The discourse on postmodern career fits all too well within a “ruthless economy”, in that it is only advantageous for those employees who were formerly also privileged in traditional career settings (i.e. highly motivated, high-skilled white-collar employees), while at the same time, the role of this economy in dictating the shape of career is obscured or glorified. Therefore, we argue that careers researchers need to take up their responsibility and build theory based on actual facts about modern-day careers rather than develop new dogmas. Protean and boundaryless careers, although concepts introduced long over a decade ago, have only just recently emerged as popular topics for empirical research. This symposium presents the

recent work of five junior researchers in the field of careers who seek to specialize in exactly this domain. The discussion, led by an established careers scholar, will tackle the following learning objectives: (1) gaining insight into the interplay of organizational-strategic and individual-psychological factors in shaping contemporary careers; (2) understanding what possible implications of postmodern career discourse are for researchers, employees and organizations; (3) examining how career theory could take employee well-being into account more explicitly by acknowledging the need for a more diversified view of careers and career success.

Integrating the talent management paradox into postmodern careers literature

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When examining the talent management literature, a twofold paradox emerges: talent management is simultaneously considered as outdated, and as more pivotal than ever to organizational survival; furthermore, talent management practices aim to retain exactly those employees most likely to leave. We examined the dynamics between individual career antecedents leading to organizational talent categorization and the subsequent effects on individual career outcomes. By doing so, we contribute to the literature: first, by integrating the careers literature with the talent management literature, thus creating a comprehensive framework for understanding talent management within a postmodern conception of career; second, by building on data coming from employees assigned to different talent categories themselves; and third, by examining cross-level effects, where organization-level variables (i.e. talent categorization) are related to individual-level variables (i.e. career antecedents and outcomes). A large-scale online survey was conducted. Employees from three organization-assigned talent categories participated: high potentials ($n = 250$), key experts ($n = 230$) and average performers ($n = 461$). The study findings indicate that talent category can be predicted by supervisor-rated performance, and to a much lesser extent, by career orientation. As for objective career

success, we found that high potentials receive more internal promotions, and at a higher speed, than key experts and average performers; we did not find effects of talent category on current salary or on salary increase. Conversely, we did not find significant differences in terms of subjective career success. High potentials were found to be less inclined to change employers under high boundaryless mobility preference, where we expected them to report the highest mobility. These findings might point to aspects outside of mobility preference in determining expected future mobility, such as the psychological contract and the organizational support and commitment related to being assigned the high potential label. It appears that the traditional model of career success is still alive, specifically for high potentials. Researchers are encouraged to clearly distinguish conjectural from empirically supported ideas about postmodern careers; organizations are recommended to allot a more central role to career orientation in the design and implementation of talent management programs.

Keywords: *talent management, talent, success, postmodern careers, antecedents*

Career transitions and their outcomes in the light of new career theory: An empirical study of business graduates

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Career transitions are an integral part of working life, and hence an important topic in careers research and practice. Transitions involve moves within the social space of an organization, occupation or career field. Postmodern career theory suggests that as traditional-organizational career patterns disappear, new career types emerge (with catchy labels such as “boundaryless”, “protean” or “post-corporate”), fostering different transition dynamics. In turn, different career transition dynamics might lead to different career outcomes. In this study we examine career transitions and their effect on objective (income) and subjective (satisfaction) career success. Our contribution to the current debate is twofold. First, we bring two aspects of career together by linking career transitions

to career success. Second, we reflect on new career concepts by presenting results from two cohorts of graduates, one representing employees from the traditional, and one from the contemporary career context. The analyses were based on a sample of two cohorts of business school graduates, from 1970 and 1990 respectively. In terms of age and gender, the cohorts are representative of the respective graduation year for the whole university. The data for the study were collected by questionnaire interviews, plotting the graduates' careers based on a curriculum vitae-type list of their jobs. The analysis uses mixed linear models, examining the effect of different forms of career transition on objective and subjective career success. The results indicate that overall, graduates from 1990 went through more job transitions during the first 15 years of their careers, although the types of transition did not change radically. In regards to objective career success, there were differences for certain types of transition; for instance, 1990 graduates experienced less increase in average income than graduates from 1970. With respect to subjective career success we did not find significant differences, except for hierarchical advancement. It appears that the different types of desired career transition still mirror aspirations in line with more traditional career paths. It is suggested that the underlying assumptions of new career concepts should be put into question, or at least nuanced.

Keywords: *career transition, postmodern career theory, career success, careers research, graduate*

Career stage and generational differences in psychological contracts

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There has been a recent escalation of research exploring the psychological contract, driven by the need of researchers and practitioners to define the 21st century employment relationship. Organizations are required to manage an increasing number of older workers alongside younger workers in organizations with flatter structures and often, fewer career paths. No longer can it be assumed that an older, supposedly “baby boomer” worker is more advanced in their career than their

younger generation X or generation Y colleague. Using the colloquially popular generational cohort distinction for age, this paper examines the impact of age and career stage on the employee's psychological contract. A survey of 345 working adults included psychological contract obligations, incentives and importance and the cognitive responses of job satisfaction, affective commitment and intention to leave. Super's (1988) Adult Career Concerns Inventory measured career stage. Significant differences between individuals' psychological contract perceptions were based on both career stage and generational cohort: higher levels of balanced obligations and fulfillment were found than either relational or transactional obligations and fulfillment; relational and transactional obligations were significantly higher for Baby Boomers than Generation Xers; a stronger negative relationship was found between transactional fulfillment and intention to leave for Generation Xers than Generation Yers; higher balanced fulfillment had a significantly stronger positive relationship with (a) job satisfaction for exploration than other career stages and (b) commitment for exploration than maintenance stages. Despite widespread colloquial use of generational cohort groupings such as Baby Boomer, Generation X and Generation Y, small effect sizes were found. Implications from the small effect sizes suggest that neither generational cohort nor career stage generalizations are likely to be effective in predicting responses in individual employees, irrespective of their age, cohort or career stage. A key theoretical contribution made by this study is to suggest the need to further investigate if the protean career concept is operating within employees' perceptions of their PC terms.

Keywords: *baby boomers, Generation X, Generation Y, psychological contract, Adult Career Concerns Inventory*

A contingency perspective applied to psychological mobility

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Increasingly, the boundaryless career model and discourse are being criticized. The assumed prevalence of boundaryless careers

can be countered by pointing to the ongoing dominance of traditional, bounded employment contracts. The claim that most workers would benefit from having a boundaryless career is, in turn, riposted by the argument that many boundaryless workers do not freely choose such careers but rather, are forced into them, through lay-offs and other types of involuntary turnover. Remarkably, most critiques are concerned with claims concerning physical aspects of the boundaryless career. Psychological mobility, another important aspect of such careers, has been largely preserved from criticism. In this study, we want to examine whether this is justified or not. In particular, we examine the prevalence and the outcomes of having a boundaryless mindset in a sample of young business alumni. Young, highly educated individuals are generally believed to benefit from having a boundaryless career. We hypothesize, however, that even for this population, psychological mobility may be bounded as well, and does not necessarily lead to benefits for the individual. We collected data from 477 business alumni graduated between 1997 and 2005. The average respondent was male (60%), 30 years old and had changed employer at least once (62%). Though most respondents were found to have a boundaryless mindset (92%), the strength of this mindset was strongly determined by personality. As personality traits are believed to be largely immalleable in adulthood, this finding indicates that there may be dispositional boundaries to people's psychological mobility. In addition, we found that not everybody benefited from having a boundaryless mindset. Only when the working environment was congruent with this mindset, psychological mobility positively affected well-being. Our results indicate that psychological features of the boundaryless career, as well, are not as widespread as often assumed, nor do they generate only positive outcomes. Having a boundaryless mindset seems to be no common "necessity", but rather one of many possible career drives.

Keywords: *boundaryless career, employment, psychological mobility, well-being, career*

Abstracts of the 27th International Congress of Applied Psychology

Individual Oral Presentations

‘Who fertilized the egg??’: Claiming discrimination through gendered constructions of responsibility

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While discrimination is widely recognised as a serious problem with negative social consequences, little research has considered how people understand particular acts to be instances of (non)discrimination. This research aims to examine in practice understandings of discrimination, focusing on how these are worked up and countered in discourse. This paper examines 285 online comments in response to an article about gender disparities in pricing of health insurance in the US, applying a critical discursive analytical method. A number of gendered discourses are drawn on in order to investigate claims of discrimination. The focus here is on how constructions of men and women as (ir)responsible are linked to fairness, thereby refuting justifications for the pricing disparity. This research provides insight into how events are understood to be instances of (non)discrimination, and how discourses justifying such discrimination as ‘fair’ can be undermined. Such findings have implications for how those fighting discrimination, based on gender or other social categories, can resist claims that unequal treatment and outcomes are justified.

Keywords: *discrimination, gender differences, responsibility, fairness*

“Knowing me, knowing you”: An exploration of the mother-daughter relationship

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Young adolescent females are increasingly engaging in risky behaviors. Family connectedness, specifically the mother and daughter relationship, is associated with reduced adolescent risk taking behaviours. Mother and daughter relationships are considered the most significant of

intergenerational relationships. It is important to understand a mother's personal experiences, emotions and cognitions with the objective to create a positive relationship with their daughter(s). In particular, little is known of the effect of mothers' resilience and self esteem and how these factors impact on their daughter's self esteem and resilience to risk taking behaviours. This study explored the relationship between mothers and their 12 year old daughters. The information obtained from this study will inform a state-wide communication strategy which aims to increase resilience to risk-taking behaviours so often associated with adolescence. The data was collected in two stages. Firstly, two separate focus groups were conducted: (1) a mothers' focus group and (2) one with their 12 year old daughters. These groups were conducted concurrently. Stage Two of the data collection comprised of a survey targeting attachment, self esteem, resilience and risk taking behaviours in both samples. Preliminary results from the focus groups demonstrated that data were consistent with the literature in the field and suggested that the basic themes emerging from other research also apply to mothers and daughters in the South-East Queensland Region. The survey data extends these findings and implications for the development of a multi-media communication strategy will be discussed. This study targets mothers' self esteem and resilience as protective factors for risk taking behaviour among pre-adolescent females. It will be argued that designing activities that acknowledge the influence of family relationships and facilitate positive mother- daughter relationships will reduce risk-taking among pre-adolescent females. These themes will be discussed in light of the quantitative survey data. Communication strategies involving multi-media applications will be considered.

Keywords: *adolescents, resilience, risky behaviours, family connectedness, self-esteem*

“Me, myself, and the others”: The influence of personal values on psychological contracts

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Despite all the advancements regarding psychological contract, it still remains largely unexplored how individual, social and organizational factors shape the way people establish these psychological links with their organizations. The current study explores this void by investigating how individual values shape psychological contracts in several of its dimensions (i.e. tangibility, contract scope, stability, time frame, exchange symmetry, and contract level). Using Schwartz's personal values framework, two hypotheses were tested: 1) collectivistic-oriented values are positively related to psychological contract dimensions; and 2) individualistic-oriented values are negatively related to all psychological contract dimensions. The sample consisted of 217 frontline employees in a large services organization. Individual values were measured with the Schwartz Value Survey (SVS), which comprises 57 items (Schwartz, 1992; Schwartz & Sagiv, 1995). Psychological contract was measured using the scale developed by Sels, Janssens and Brande (2004). Results show a good support for hypothesis 1 (collectivistic human values are positively related to all psychological contract dimensions), and a moderate support for hypothesis 2 (individualistic human values are negatively related to the same psychological contract dimensions). In particular, results show that personal values have an impact on how employees perceive reciprocal duties in the relationship with their employer. We observed that certain values are associated with certain relational obligations, whilst others relate with transactional obligations. For instance, personal values such as stimulation and self-direction are often associated with employees' perceived transactional obligations towards the organization as well as with employers' transactional obligations perceived by the employees. Employees who emphasize value types as conformity and security – carrying out their behaviors seeking the acceptance and maintenance of institutionalized rules and norms and valuing the group's harmony and well-being – tend to appreciate relational obligations in the employment relationship. Our work also shows that mutual obligations as perceived by employees affect their individual performance. Employees' performance is higher when they accept and conform to hierarchical and status

differences (exchange asymmetry), when they commit to organization's purposes (flexible/broad scope) and when they adopt flexible and tolerant behaviors towards changes in the organization (flexibility). Similarly, employees' performance is higher when they expect the employer to offer the opportunity to renegotiate contract terms whenever circumstances change (flexibility) and to use a rewards' system based upon individual performance (individual regulation).

Keywords: *personal values, psychological contract, collectivistic-oriented values, individualistic-oriented values*

“Two-hit” hypothesis of schizophrenia and the auditory evoked potentials in the rat

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Reduced mismatch negativity (MMN) is a robust finding in schizophrenia. It is correlated with other cognitive impairments in patients and with grey matter loss in frontotemporal regions. The goal of the present project is to establish a rodent model based on the "two-hit" hypothesis of schizophrenia and assess the success of the model by the extent to which it produces a reduction in MMN and other auditory evoked potentials (AEPs). However, the first step for this project is to assess whether MMN-like activity and other AEPs can be recorded in our experimental set up. Event related potentials to 3 kHz tones were measured over auditory cortex in freely moving Wistar rats ($n = 3$). The stimulus paradigms allow (1) control for stimulus attributes and extraction of long (100 ms) and short (50 ms) duration MMN and (2) for checking whether the MMN-like activity, if observed, is due to a memory based component. Event related potentials to clicks were also

measured to investigate other AEPs with different stimulus onset asynchronies. Preliminary data indicate that event related potentials have been recorded. In addition, we observed AEPs in non-deviant event related potentials. The amplitude of AEPs increased with longer stimulus onset asynchronies. This pattern was similar to the pattern in humans with longer stimulus onset asynchronies. While the preliminary data are encouraging, data need to be analysed further. We also need to collect data from more animals.

Keywords: *reduced mismatch negativity, schizophrenia, cognitive impairment, auditory evoked potentials, rats*

A cluster analytical approach of gender, impulsivity, expectancies, self-efficacy and self-esteem on drinking and eating behaviours in young people

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This study aimed to examine the drinking and eating behaviours of Australian young people using cluster analysis to identify groups of like-minded young people. In particular, past research has identified that increased alcohol consumption is related to an increase in binge eating, and that impulsivity, expectancies, self-efficacy and self-esteem have an influence on both problematic drinking and eating behaviours. However, few studies have explored these relationships in a non-clinical sample. The sample consisted of 170 participants (48 males and 122 females) aged between 18 and 30 who were recruited using social networking websites, online survey methodology. Participants completed measures to assess alcohol consumption, eating attitudes and behaviours, impulsivity, drinking expectancies, eating expectancies, self-efficacy and self-esteem. A hierarchical cluster analysis was performed to form groups of like-minded participants based on drinking behaviours, eating behaviours, impulsivity, expectancies, self-efficacy and self-esteem. The cluster analysis revealed five distinct clusters. The clusters were compared and contrasted based on the factors of the study and revealed two clusters characterised by

impulsive episodic drinking and eating behaviour, and another a cluster characterised by controlled drinking and eating, as well as two further clusters. The cluster analysis provided valuable insight into the drinking behaviours, eating behaviours and underlying psychological processes that characterise young people. In particular, the results contributed to the previous understanding of the psychological factors that underlie and protect against problematic drinking and eating behaviours. The cluster analysis highlighted a number of avenues for future research and the findings can be applied to education and treatment programs.

Keywords: *impulsivity, self-esteem, drinking behaviours, eating behaviours, self-efficacy*

A comparative study of styles of coping with work-stress in 16 different national contexts: Towards a culture centric approach

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In this investigation with 16 countries, we sought to examine the distribution of problem-focused and emotion-focused coping styles in professional managers and other occupational classes in a sample of over 5000 individuals. The objective of the study was to examine as to whether problem-focused coping was more frequent as a method of dealing with work induced stresses in managerial samples in all countries regardless of their standing on the individualism-collectivism continuum. Another objective was to examine the preponderance of emotion-focused coping in samples which were not necessarily classified as managerial or professionals in all the countries. Data were collected from US, Canada, Australia, France, Germany, Poland, Japan, China, India, South Korea, Malaysia, Indonesia, UAE, Chile, Brazil, and Venezuela. Some of the countries were clearly more individualistic in their orientation and others were more collectivistic. Using Singelis et al.'s (1995) scale of horizontal and vertical individualism and collectivism, we also correlated the scores of VI, VC, HI, HC with problem-focused and emotion-focused coping

scales of the 5341 individuals in our sample from 16 countries. The results are interpreted in terms of cultural variations as well as variations individual propensities to cope with work-stresses as a function of occupational cultures (Schneider, 2008). The results show a pattern of vertical individualism to be a better predictor of problem-focused coping styles compared to horizontal collectivism and vertical collectivism. The professional classes tended to favor a more distinct pattern of coping with work stresses by using a problem solving and an active intervention kind of style. Managers from all the countries regardless of their locations in the economic development or cultural orientation in terms of individualism-collectivism continuum tended to prefer an active problem-solving style for coping with work and organization induced role stresses. Other occupational classes below the managerial class, however, were more predisposed towards engaging in an emotion-focused style in dealing with work and organizational stresses in their work roles. The conclusions of the study are interpreted in terms of their implications for extending the role of cultural variations in human stress and cognition in work organizations. It is important for the field of international applied psychology to be concerned with improving coping effectiveness of people at work by exploring the kinds of patterns or styles they prefer in dealing with work stresses that are associated with performing work related duties and responsibilities.

Keywords: *problem-focused coping, emotion-focused coping, stress, individualism-collectivism continuum, professional managers*

A comparison between the self-assessed and instructor-assessed driving skills of a sample of Japanese driving school students

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This study was conducted to examine the accuracy of the self-evaluated driving skills of Japanese novice drivers by comparing the self-assessments with those made by a driving instructor. In addition, we tried to examine the

relationship between the extent of overconfidence—defined as the difference between the drivers' self-rating and the instructor's rating—and the drivers' characteristics, such as gender and age. A sample of Japanese driving test candidates ($n=2021$) completed a self-assessment on a five-point scale, shortly after clearing a practical driving test conducted at a driving school. The examiner also rated the candidates' performance on the same scale. The assessed 19 items were categorized into five skill sets, namely, "turning indicators," "vehicle handling," "speeding," "safety confirmation," and "social skills." The comparison between self-assessment and examiner-assessment revealed that the majority of Japanese driving school students had a tendency of overestimating their own driving skills, especially in "vehicle handling," "social skills," and "safety confirmation." Furthermore, the results indicated that males displayed higher levels of overconfidence than females, while older candidates (over 25 years) realistically assessed themselves in contrast to the younger ones. However, most candidates were not found to overestimate their skills in the areas of "turning indicator" and "speeding." To conclude, the result from comparing the drivers' self-assessment with the instructor's assessment for Japan is consistent with the common findings of similar studies focusing on Europe—that young male drivers overestimate their skills more than female and older drivers. This study highlighted the need of improving the accuracy of self-assessments at driving schools before issuing licenses.

Keywords: *driving skills, self-assessment, Japan*

A comparison of three personality trait models and the implications for selection into the medical and allied health professions

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Personality assessment is used widely in selection procedures in the business sector, the armed services and police services. However, medical and allied health sector educators and

employers are only recently considering the use of non-cognitive variables in selection. For some 10 years Bore, Munro and Powis have been developing a three-domain model and self-report measure of interpersonal personality specifically targeted at the interaction between practitioners and their patients/clients (e.g., Bore, Munro & Powis, 2009). The three domains are Involvement (empathy, confidence with others) vs. Detachment (aloof, narcissistic), Resilience (emotional stability, capable under pressure) vs. Reactivity (anxious, moody, volatile) and Control (high self-control, orderly, conscientious vs. low self-control, disorderly, disregard for rules). We compared the predictive validity of this Involved, Resilient and Controlled (IRC) model against two other trait-based personality models: the Big 5 measured using the 30 facet IPIP inventory, and the 11 DSM-based traits of the Hogan Development Survey (HDS). The criterion variables were self-report measures of problematic personality styles (Psychopathy, Machiavellianism, and trait Aggression), two measures of psychological distress (the Kessler 10 and Global Severity Index scores from the Brief Symptom Inventory) and two measures of psychological wellness (Subjective Well-Being and Hope). The battery was completed by 236 first year psychology students. Factor analysis results supported the theoretical structure of each of the three models. Using regression analysis the IRC and Big 5 were found to account for a significant proportion of variance in each of the criterion variables with R-Squared (adjusted) values ranging from 38% to 65%. The HDS R-Sq (adjusted) values ranged from 24% to 38%. Both the IRC and the IPIP Big 5 strongly predicted Psychopathy. The implications of the findings in using the models and measures for selection will be discussed. Of specific note is that the results suggest that both the IRC and the IPIP measures could help to detect potentially psychopathic medical practitioners at an early career stage.

Keywords: personality assessment, problematic personality styles, psychological distress, psychological well-being, psychopathy

A cross-cultural comparison of the reliability generalization studies on the

Eysenck Personality Questionnaire and its implications

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This paper attempted to study the reliability generalization on the Eysenck Personality Questionnaire (EPQ) in China. The analysis was done through descriptive statistics and hierarchical multiple regression with data from seven Chinese major psychology journals for ten years. The findings were compared with those of the analogous study on EPQ in other countries, which was conducted by Caruso et al. Comparing the results at home and abroad, the similarities lie in: 1) the sampling characteristics do affect the reliability coefficients; 2) A low proportion of articles report reliability coefficient or its range from the data at hand; 3) P scale owns a low reliability coefficient; 4) standard deviation of scores in subscales is the main predictor variable for the reliability coefficients of P, N, E and L subscale. Differences in the studies are also discovered: 1) 84.82% of researches in China do not report reliability coefficient from the data at hand, comparing with 62.51% of researches in the other countries, 2) Variables such as the number of items, the mean of scores, standard deviation of age, sample type have different predictive functions on the reliability for EPQ in China and in other countries. The prediction from mean of scores to P, N and L subscale as well as the prediction from number of item to P, E and N subscale are found to be statistically significant in China, but not in Caruso's study. On the other hand, the prediction from standard deviation of age to P, and L subscale as well as the prediction from sample type to P subscale are found to be statistically significant in Caruso's study, but not in China. The analysis and comparison demonstrate that 1) "reliability induction" is inappropriate when using questionnaires available, and it is necessary to report the reliability coefficient of the samples at hand; 2) a certain heterogeneity of samples may enhance the reliability in the use of EPQ; 3) the increase of item numbers which does not follow the psychometric rules will not improve the reliability of scores necessarily.

Keywords: *Eysenck Personality Questionnaire, China, reliability, cross-cultural comparison*

A decisional hierarchy in interactive ad-hoc-evaluation of desktop software by end-users

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The aim of this study is to understand how end-users decide when choosing from a set of software programs. The study's context is today's commonplace practice of satisfying one's computer software needs by downloading demo versions or freeware from distributive internet portals. This means that individuals frequently do not base their evaluations on attribute lists or expert reviews, but upon trying out the software interactively without any introduction, advice or tutoring. In an exploratory approach, 20 individuals were confronted with a set of three programs. Before their final task of drawing a given flowchart as quickly and as nicely as possible, they were told to pick the program that suited them best. The think-aloud method was used for accessing their cognitions during the process. The participants' individual interactions with the software as well as their utterances were analysed for critical incidents (e.g. excitement about a feature or failure to produce certain effects). These incidents were interpreted in connection with the individual's decision, thus deriving hypotheses explaining why certain decisions were reached. Across individuals, a consistent hierarchy emerged, suggesting a Satisficing approach to decision making: the most important aspect appears to be an individual's ability to produce the required function. Once this has been secured, the option producing the best results is chosen. The ease of using a program was relegated to third place. Soft features such as optical appearance, familiarity, etc. came in last place. This result can be fitted into the Technology Acceptance Model (TAM), enhancing it in regards to the non-tutored evaluation of software. The most important extension is that TAM's "ease of use"-construct seems to work on two levels, with the novel feature that it moderates the effect of external variables on the perception of "utility". With respect to the fact that individuals frequently failed to produce certain effects but

would not use traditional help mechanisms, we find that novel approaches to recognising what a user intends to do and to providing proactive and unobtrusive help must be developed. This could significantly improve the chances of software which is to be evaluated without tutoring or introduction.

Keywords: *end-users, desktop software, decision making*

A family-centred interdisciplinary service model to address challenging behaviour of children and young adults with developmental disabilities

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This paper describes the implementation and evaluation of a family-centred behaviour support team (Positive Behaviour Team) developed to support individuals (aged 6-25) with a developmental disability who engage in behaviour that is challenging (e.g. Physical and verbal aggression, self-injury, destruction to property). The team was developed in recognition that discipline specific therapeutic interventions were often insufficient to meet the needs of families and that both clinical and systemic strategies are necessary to facilitate effective and lasting positive change for individuals and families. The Positive Behaviour Team was developed in the context of a sector-wide review of behavioural services for people with a disability in Western Australia. A multi-disciplinary team was formed consisting of experienced clinical psychologists, speech pathologists and social workers supported by a clinical team leader and manager. Clinicians from all disciplines were trained in a variety of evidence-based approaches, including Positive Behaviour Support/Applied Behaviour Analysis, functional communication interventions and family systems models. Individual and peer supervision processes were developed to support consistent implementation of the service model as well as to safeguard team health. Key features of the service model included a referral process consisting of periodic calls for referrals, rather than a wait-list approach; services provided within the family

home to multiple family members; allocation of multiple clinicians from different disciplines to every family; an intensive assessment designed to help families understand drivers of challenging behaviour holistically and equipping them with the information necessary to develop their own goals in partnership with clinicians; supportive implementation of strategies during intervention; an emphasis on helping families to plan for the future (maintenance of change) prior to closure. Outcomes were measured using a combination of quantitative and qualitative measures which are currently being collated at the time of preparing the current abstract. Quantitative measures included indicators of behavioural problems, parental functioning, family coping, quality of life and staff health. Qualitative measures included interviews with family and staff concerning their experience of the intervention process and their satisfaction with goal attainment. Challenging behaviour is best addressed taking into account not only the specifics of the behaviour, but the family context. Interdisciplinary practice implemented using a coherent service model and drawing on a combination of evidence-based approaches provides optimal and potentially sustainable outcomes for individual with a disability and their families. This model of service also appears to provide staff with a positive and fulfilling working environment despite the intensity of the challenging behaviour and family issues.

Keywords: *family-centred behaviour support team, developmental disorders, behaviour problems*

A formative versus reflective analytical approach to work ability measurement

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In the last few decades discussions around formative models have gathered speed. The literature in psychology and management pays growing attention to formative measurement models for operationalising construct variables (Diamantopoulos, Riefler, & Roth, 2008). Despite the appropriateness of using formative indicators in many circumstances, these are often either neglected or miss-specified in empirical studies. Using unsuitable reflective

measurement models undermines the validity of the constructs, misrepresent the structural relationship between them and lower the value and validity of the findings. Building on theoretical and empirical considerations, the present study primarily employed Partial Least Square (PLS) analysis and Structural Equation Modelling (SEM) to validate and design both formative and reflective measurement models on a large data set from a workplace survey. The results of the study have significant theoretical and empirical implications for the areas of psychology, management and other related disciplines.

Keywords: *formative approach, construct variables, validity, reflection*

A longitudinal study of the determinants and consequences of career change

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Career change refers to movement to a new occupation or profession that is not part of a typical career progression. This can be distinguished from job change which is movement to a similar job or a job that is part of a normal career path. The first aim of this study was to understand the determinants of career change. It was hypothesized that age, gender, marital status, job satisfaction, job security, occupation tenure, intent to change and personality would influence career change. The second aim of the study was to examine if key variables improved after career change, specifically, these were job satisfaction, job security, salary, hours worked and life satisfaction. Data from the Household, Income and Labour Dynamics in Australia (HILDA) survey were used to examine the determinants and consequences of career change. This Australian government sponsored data set has collected annually an extensive range of information about individuals and their families. We accessed two sub-samples of the data set. To assess the first aim we selected individuals who were working full-time in Years 5 and 6 of the data collection ($N = 4547$). The predictor variables were obtained from Year 5 and the dependent variable of career change was obtained one year later (Year 6). The second aim

examined only those individuals who had changed careers in Years 2 – 6 ($N = 1,467$). The findings showed that age, sex, education, occupation tenure, job security, previous job search, quit probability, extraversion and openness to experience were significant predictors of occupation change. Also that after career change, individuals had better job security and job satisfaction and worked less hours; their salary and overall life satisfaction remained constant. Theoretical and practical implications of the findings will be discussed.

Keywords: *longitudinal study, career change, determinants, job satisfaction, job security*

A model of the promotion of health and well-being in hospital staff: The relationships linking organisational culture, stress and change

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This research focuses on the relationship between leadership/mission, the policies and organisational culture of a large Dublin hospital, and outcomes such as job satisfaction, health and well-being, stress and coping, and desired future change. A cross sectional random sample of 179 staff, including nurses, medical and allied staff and administrators were studied, adopting a systems model of change. Attitude scales were developed using bottom-up and top down research methodology and tailored to the demands of the particular hospital. Results, including descriptive statistics, qualitative analysis of focus groups and interviews, factor analysis, and multiple linear regression analysis, will be presented. Challenges and priorities for the population will be discussed and outcomes for future change mapped out.

Keywords: *leadership, job satisfaction, health, well-being, stress*

A multidisciplinary approach to measuring spatial performance in novice designers

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Design Cognition is a relatively new domain and as such there are gaps in our understanding of the cognitive implications of the design process. Spatial ability is not well understood in the domain although it's very role in the understanding of shapes and relations of objects to each other is potentially important to Design. The ability to improve design thinking and understanding is desirable and hence the potential of spatial ability is significant. The ability to effectively and efficiently manipulate imagined objects as a thought process is valuable to most design domains. Spatial ability could be considered a fundamental skill in design disciplines. This paper reports on a study conducted with 194 novice designers that investigated spatial performance across gender and several design disciplines. The study was a collaborative project between design and applied psychology and central to the study was an online test of 3D ability (3DAT) that measured choice accuracy and reaction time. The 3DAT was developed in accordance with psychometric test construction standards and the analytical procedures were based on the rigour normally applied to experimental psychology research. The 3DAT consisted of 12 subtests with 6 test items in each and was developed as part of an Australian Learning and Teaching Council (ALTC) funded project. Spatial ability can be defined as the performance on tasks that require the mental rotation of objects, the skill to understand how objects appear from different perspectives, and the skill to conceptualize how objects relate to each other in space. The study examined differences in gender performance and differences between three design disciplines on the 3DAT and each of the 12 subtests. Consistent with the literature, a significant gender difference favouring males was found for the 3DAT and most of the subtests. Architecture students consistently outperformed participants from construction management and technology teaching. We report individual differences and focus on the implications for students studying graphical communication courses in the higher education sector. This project provides a good insight into the potential of applied psychology and what it can offer to other disciplines. Details of the collaboration are also reported.

Keywords: *spatial performance, novice designers, design cognition, gender, mental rotation*

A multivariate strategy for the prediction of vigilance

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Vigilance and sustained attention are important in many operational environments including industrial inspection, transportation, medical monitoring and military surveillance. However, standard psychometric instruments, including personality tests are only weak predictors of vigilance. This presentation aims to provide a brief overview of three recent studies that support a multivariate approach, based on attentional resource theory. Predictors included measures of ability and psychophysiological and subjective response to a cognitive challenge. The studies reviewed used a two-phase design. Participants performed, first, a short high-workload task or tasks, and, second, a longer task requiring sustained attention. Different sets of predictors were explored across three studies ($N = 210, 462, 294$). All included the Dundee Stress State Questionnaire (DSSQ), which provides an assessment of task engagement. Two studies also included standard personality and ability tests and a short vigilance task. The third study assessed a psychophysiological response to cognitive load, bilateral cerebral bloodflow velocity (CBFV), which was measured using Transcranial Doppler Sonograph (TCD). Longer vigilance tasks included those requiring attention to an air traffic control display, decoding alphanumeric sequences, and monitoring military tactical displays. Durations of these tasks ranged from 36 – 60 min. Multiple regression and structural equation models were used to assess the predictive validity of personality, ability, stress response and CBFV. The most robust predictor was subjective task engagement. The engagement response to the initial short task(s) reliably predicted subsequent vigilance. The CBFV response was also predictive, and added to the variance explained

by subjective measures. Ability measures, including a short vigilance task, also correlated with longer-duration vigilance performance. Multivariate modeling confirmed that predictive validity is maximized by including multiple measures. Up to 30% of the variance in performance was explained by the models. Data fit the resource model of vigilance, which attributes loss of sustained attention to depletion of a general processing resource. The strongest predictors – subjective engagement, CBFV and ability – may all be conceptualized within a resource model. However, no single measure may be used as a ‘gold standard’ index of resource availability. Effective prediction in operational environments requires integrating information from multiple indirect markers for resources.

Keywords: *vigilance, sustained attention, measurement, performance*

A national survey of multicultural counselling competency in Malaysia: Preliminary analyses

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Multicultural counselling is a rapidly emerging profession in most developed countries such as the United States of America, Britain, and Australia. However, in the specific cultural context of Malaysia, neither understandings nor practices of multicultural counselling have been fully explored. This research in progress aimed to determine the extent to which practising professional counsellors perceive themselves as multiculturally competent when counselling clients who come from different cultural backgrounds in Malaysia. A national survey study was conducted targeting 1500 registered practising counsellors at various states in Malaysia. A 32-item questionnaire, the Multicultural Counselling Survey – Malaysian Version, was developed based on the existing research literature to assess the self-reported multicultural counselling competency of Malaysian professional counsellors when counselling clients in the Malaysian context. More than 300 counsellors responded to this questionnaire via mailed survey, while 170 responded via online survey. Preliminary

findings from the mailed survey data regarding participants' self-perceived multicultural counselling competency are reported. Results showed that, although Malaysian counsellors reported good understanding regarding multicultural counselling, they scored low in some multicultural skills areas such as counselling gay and lesbian clients in the Malaysian context. These results highlight the importance of understanding specific cultures and contexts to become multiculturally competent when working with minority clients from different cultural backgrounds. Multicultural counselling competency needs to be integrated into all counselling in Malaysia. Implications of this research for the education and training of counsellors in the specific cultural context of Malaysia are discussed.

Keywords: *multicultural, counselling, Malaysia, minorities*

A naturalistic study of executive function and problem-solving in mathematics

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Few studies on executive function (i.e., inhibiting, shifting, and updating) and problem-solving in mathematics have isolated the type of executive function that contributes to cognitive challenges for students during the different stages of problem-solving. The aim of this research was to examine the relationship between executive function and six proposed stages of problem-solving in naturalistic settings, while students completed mathematics homework at home. Modified talk- and think-aloud protocols were utilized to examine "mathcam video diaries" completed by students at home (Ericsson & Simon, 1993, 1998). The data set included select episodes where students were either describing or having difficulties in their problem-solving ($n = 342$). Episodes were transcribed and coded twice to identify when in the problem-solving sequence challenges were experienced, and what appeared to be the related executive function. Descriptive statistics, as well as Fisher Exact Tests of significance,

Cramer's V, and Kendall's Tau-b were computed to estimate predictive relationships. Updating may be the most significant challenge faced by students at the onset of the problem-solving task, and shifting at the conclusion of the problem-solving task. Inhibiting was found to present the most significant challenge only during the carrying out stage of the problem-solving. Statistical analysis confirmed a relationship between executive functions of inhibiting, shifting, and updating, and the six stages of problem-solving (i.e., understanding the problem, devising a plan, carrying through the plan, looking back, generalizing, and problem posing) ($P < 0.05$, two-sided Fisher's Exact Test). Cramer's V and Kendall's Tau-b were found to be significant but weak and very weak, respectively, suggesting neither an ordinal or nominal relationship. This research provides an extension to existing studies (predominantly experimental) by showing that different executive functions may be implicated at different times during problem-solving. Results suggest that perhaps different experimental designs need to be explored to investigate multiple stages of problem-solving. Teachers should implement different pedagogical interventions depending on where in the problem-solving stages the student is experiencing difficulty and depending on which executive function is implicated.

Keywords: *executive function, problem-solving, mathematics, students*

A pilot of psychorationalist based therapy with 10 injured workers demonstrating large effect sizes for anxiety, depression and trauma

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Psychodynamic therapy has been accused of being too lengthy and lacking an evidence base to be used in the management of worker injuries. Thus cognitive behavioral therapy and applied relaxation therapy have been used instead. However, recent evidence from American psychiatric studies of psychoanalysis for anxiety (twice per week for 12 weeks) achieved a 73% symptom remission rate with only 7% dropouts (Milrod, et.al. 2007). These

results are impressive when compared with applied relaxation therapy results of only 39% remission and 34% dropouts. In this article we report on a trial of psychorationalism, a form of psychodynamic therapy, with 10 injured workers (6 female, 4 male). All workers had a soft tissue injury more than 52 weeks previous yet remained at reduced hours of work or unemployed. People were seen once per week for 12 weeks. Various psychometric tools were used to assess anxiety, depression, self-efficacy, self-esteem, defence styles and trauma. The tools were administered at baseline, week 6 and week 12. As there was no control group to compare results, an effect size calculation was used. The initial results indicate an effect size (Cohen's *d*) of 1.84 for anxiety, 2.13 for depression, and 1.08 for trauma. When Cohen's *d* is above 0.8 the effect size is considered large. Therefore, these effect sizes demonstrate the effect of psychorationalist therapy in this sample to be large. The initial results indicate that Psychorationalist therapy offers an effective form of treatment to injured workers. Further clinical trials will establish if the above effect sizes are typical. Given the current data further trials are encouraged.

Keywords: *psychorationalism, worker injuries, depression, trauma, anxiety*

A profile of the young tennis player at risk of burnout

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Four empirical studies were conducted to examine the change over time in perfectionism, trait anxiety, motivation, and coping, and the impact these variables have on burnout. This research was guided by Smith's (1986) Cognitive Affective Model of Athlete Burnout with the aim to identify a profile of the young tennis player at risk of burnout. Young tennis players between the ages of 10 and 17 years were assessed on burnout, perfectionism, trait anxiety, motivation, sources of stress and coping behaviour over 25 months. The tennis players were competing at the school, state and/or national level. Since burnout is considered to be

a fluid construct that builds up slowly, the longitudinal analysis allowed for the development of burnout to be measured overtime. Perfectionism, trait anxiety and motivation remained stable over the testing period. The use of ineffective coping strategies (i.e., non-productive) increased and effective coping strategies (i.e., productive) decreased over time. Age and components of perfectionism (i.e., positive perfectionism), coping (i.e., non-productive), and motivation (i.e., amotivation) were found to be significant predictors of burnout in the young tennis players. Positive perfectionism was identified as a protective factor and non-productive coping, amotivation and age as risk factors for burnout. The results show that the relationship between personality, motivation and coping variables and burnout is multifaceted. The results reported in this research have significant implications in the understanding, prevention and intervention of burnout in young tennis players. Coaches, parents and others working with young tennis players must be mindful of amotivation and the use of non-productive coping strategies particularly during the middle stages of adolescent development. Vigilance and continuous assessment of coping behaviour, motivation and burnout symptoms during the youth sport experience is recommended.

Keywords: *perfectionism, trait anxiety, motivation, coping, tennis player burnout*

A prospective study of time perspective and well-being: Present focused time perspectives predict change in depression

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There is general consensus that we all see the world differently and that this is an important element in understanding human behaviour. How we see the world is considered a factor influencing illnesses such as depression (Beck, 1976). But what does seeing the world differently mean? It is literally true with regard to vision. No two people share exactly the same vantage point and even if they did, eye-tracking experiments indicate that they would perceive

different information, depending on their objective, rather than the entire visual field (e.g., Yarbus, 1965). It is less obvious that the experience of time is a subjective one and is integral to seeing the world differently, perhaps contributing to a range of illnesses. In this study, the construct time perspective was used to operationalise the concept that the way individuals see the world affects their well-being. The Zimbardo Time Perspective Inventory (ZTPI; Zimbardo & Boyd 1999) was validated on an Australian sample of 449 undergraduate students in order to be used in a prospective study of time perspective and well-being. The subjective nature of time perspective – one's view of the past, present and future - including how time perspective can become biased was reviewed. Previous relations between time perspective and well-being were replicated and extended: time perspective was found to be predictive of well-being during a challenging event. Sixty-five participants took part in the study in which well-being was measured prior to and during a university exam period. Biasing the present focused ZTPI time dimensions present-hedonistic and present-fatalistic was predictive of greater depression symptomatology. Bias towards the present-fatalistic dimension approached significance in predicting increased anxiety and stress, and diminished happiness. Present focused time perspectives involve the individual being susceptible to features of their current situation. The thread of past, present and future is interrupted as well as means-end processes. The possibility that time perspective confers a vulnerability or resilience to psychopathology in different contexts was considered

Keywords: *vision, depression, well-being*

A psychological perspective on god-belief as source of well-being and meaning

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This paper reports on a qualitative exploration of the well-being and meaning that second- and third-generation Christians from an African context experience because of their integration

of religion in their life and being. A case study design, which is ideally suited to an in-depth study, was used. Individual interviews were conducted, digitally captured, transcribed and reflected upon in the light of the research questions. Twelve participants, eight male and four female, ranging in age between twenty five and sixty five years were individually interviewed. A total of fourteen hours of audio material was transcribed for detailed analysis and interpretation. The differences and similarities in the God-image and God-concepts in traditional African religion and Christian beliefs and how these influence adherents' philosophy of life form a core part of the study. Participants, who can all be described as intrinsically religious, create meaning in the light of the tenets of African and Christian religion they accept and individually forge into an integrated worldview or system of meaning. The power of this system to frame understanding and make sense of experiences is explicated, highlighting the crucial role of feeling individually significant and safe. The insights gained in this study of the role that religion plays in the creation of meaning and the contribution of religion to the psychological well-being of Christians from an African context, could be translated into psychological practice. The practice fields of pastoral counselling and trauma counselling can base therapeutic interventions and/or guidance on the fact that religious beliefs and practices can provide a basis for a transcendent sense of personal growth, efficacy, mastery and purpose in life. The findings of this study suggest that religious beliefs and experiences may provide an important source of personal strength that promotes psycho-social well-being, mental and physical health and positive emotions such as joy, gratitude, forgiveness, hope and optimism – all building blocks of psychological well-being.

Keywords: *religion, Christian, African, well-being, case study*

A psychometric evaluation of career decision self-efficacy scale-short form with Turkish undergraduates

IK, E. (Selcuk University), IK, E. (Selcuk University)

Since the Career Decision Self-Efficacy Scale-Short Form (CDSES-SF) developed by Betz, Klein, and Taylor (1996) is one of the most used instruments within the career counseling field, there have been many attempts to assess its reliability and validity with different languages, cultures and ethnic minorities (Creed, Patton, & Watson, 2002; Gushue & Whiston, 2006; Hampton, 2005, 2006; Watson, Brand, Stead, & Ellis, 2001). However, especially in non-English speaking countries, the use of CDSE-SF is still unknown. Therefore, this study examines the reliability and validity of CDSE-SF with Turkish undergraduates. Participants were 368 Turkish undergraduate students from a large state university. Internal consistency, test-re-test reliability and item total correlations were calculated for reliability studies. A principal component factor analysis was employed for structural validity, age and gender differences were tested for criterion validity, and Vocational Outcome Expectations Scale and Rotter Locus of Control Scale (RLOCS) were used for convergent validity. Values of coefficient alpha indicated high reliability ($r = .88$), a seven week test-re-test reliability coefficient was $r = .81$, and item total correlations ranged between .34-.62. Even though there is little support for a five factor structure as in the original form, the CDSES-SF is a generalized instrument for assessing career decision self-efficacy. The convergent validity of CDSE-SF was supported by a high correlation with VOE and a moderate correlation with (RLOCS). Besides, as in the previous literature, the older group (20 and below) scored higher than the younger group (21 and above) and no significant difference was found in terms of different age groups. CDSES-SF is a reliable and valid measure when used with Turkish undergraduates. As a single factor measure, most of the findings of the current study support the previous findings. The implications of these findings are discussed and some recommendations were given.

Keywords: *Career Decision Self-Efficacy Scale-Short Form, career counselling, Turkish, undergraduate students*

A psychometric evaluation of the satisfaction with life scale in a general population sample from China

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This study aimed to examine the psychometric properties of the Satisfaction with Life Scale (SWLS) in terms of factorial validity and measurement invariance across gender, age and residential region (city/county town/rural) with a general population sample in China. The stratified multi-stage random sampling method was used to obtain a nationally representative sample of 4,795 respondents from ten capital cities, eleven county towns and eleven rural areas in Mainland China. Face-to-face interviews were conducted to gather respondents' evaluation of life satisfaction using the SWLS. Confirmatory factor analysis (CFA) was used to examine the factor validity, and multi-group CFA was employed to demonstrate the measurement invariance of SWLS across gender, age, and region. Results showed that the SWLS has a high internal consistency reliability, a one-factor structure with a wording effect on Items 4 and 5, strict invariance across gender, and partial strong invariance across age (Items 1, 2 and 3) and residential region (Items 1 and 2). Specifically, people from different age or residential region groups had the same perceptions of the items tapping present life satisfaction (Items 1, 2 and/or Item 3), but not of the items tapping past life satisfaction (Items 4 & 5). Authors concluded that time frame effect existed in the evaluation of life satisfaction for Chinese using the SWLS, and the effect was not invariant across different age or residential region groups. It was speculated that this effect was related to the differences of life experiences of respondents from different groups due to the rapid economic and societal change of China during the past three decades. However, more research is needed to address how social transition would influence people's subjective well-being.

Keywords: *satisfaction with life scale, China, well-being, social transition*

A psychometric study on college student's creativity in China

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The aim of this study was to develop a Creativity Scale for college students in China, and to examine its reliability and validity. Based on interviews and experts' evaluation, a previous questionnaire with 50-item version was developed. After a pretest in 285 college students for determination, a 40-item version of formal questionnaire, a random sample of 800 college students completed it; reliability and validity of College Student's Creativity Scale were analyzed. Firstly, after exploratory factor analysis, a 40-item version of questionnaire including seven factors was established. These seven factors could explain 59.18% of the total variance, and were confirmed by confirmatory factor analysis ($\chi^2/df=2.48$; NFI=0.98; CFI=0.99; GFI=0.97; AGFI=0.94; RMSEA=0.078). Secondly, the internal consistency of the scale was good ($\alpha=0.902$), and the retest reliability was 0.897. Thirdly, the reliability and validity of College student's Creativity Scale were corresponded with psychometric standard, and could be used as an effective and reliable tool for assessing college student's creativity in China. Under the condition of this research, we could make these conclusions: the Questionnaire of College student's Creativity Scale corresponded with psychometric standard in reliability and validity, and could be used as an effective and reliable tool for assessing college student's creativity in China.

Keywords: *Creativity, China, college students, reliability, validity*

A randomised controlled trial of the ABCD Parenting Young Adolescents Program: Post treatment outcomes

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Parenting programs delivered to parents during their child's transition to adolescence offer a potentially effective approach to reducing engagement in dangerous risk-taking. The aim of this study was to examine the efficacy of a parenting program that combines a behavioral

family intervention (BFI) approach with acceptance-based strategies to promote positive parenting practices, parent-adolescent relationships, and parent and adolescent outcomes. A total of 180 parents of young adolescents were randomly allocated to either intervention or wait-list control conditions. Parents allocated to the intervention condition participated in the ABCD Parenting Young Adolescent Program, a six session group BFI program that incorporates acceptance-based strategies. The program aims to promote parenting factors associated with positive child outcomes, thereby addressing many of the risk and protective factors likely to have a preventative effect for adolescent risk taking and problem behavior. Assessments of adolescent behaviour and conflict, parenting practices, and parenting stress and depression were completed prior to, and immediately after, the intervention. Post-intervention questionnaires were returned by 114 (63%) participants. Both completer and intention-to-treat analyses were conducted. After controlling for pre-intervention differences, parents in the intervention condition reported that their adolescent had significantly higher prosocial ($F(1, 113) = 5.57, p = 0.020, \text{partial } \eta^2 = .048$) and significantly lower conduct problems ($F(1, 112) = 3.99, p = 0.048, \text{partial } \eta^2 = .034$) and total difficulties scores ($F(1, 110) = 4.29, p = .041, \text{partial } \eta^2 = .038$) compared to the control condition. Intervention parents also reported significantly lower stress associated with adolescent moodiness ($F(1, 111) = 4.74, p = 0.032, \text{partial } \eta^2 = .042$) and parent life restriction ($F(1, 90) = 13.73, p < 0.001, \text{partial } \eta^2 = .135$), adult relations ($F(1, 82) = 28.99, p < 0.001, \text{partial } \eta^2 = .266$), social isolation ($F(1, 110) = 6.56, p = 0.012, \text{partial } \eta^2 = .057$), incompetence/guilt ($F(1, 109) = 14.54, p < .001, \text{partial } \eta^2 = .120$), stress in the parenting domain ($F(1, 110) = 22.88, p < .001, \text{partial } \eta^2 = .175$) and overall stress ($F(1, 113) = 9.11, p = 0.003, \text{partial } \eta^2 = .076$) relative to the control condition following the intervention period. No other statistically significant differences were evident ($p < .05$). The current study revealed a number of positive effects for parents participating in the ABCD program that suggest that the program may have benefit to parents of young adolescents in assisting them to promote or maintain protective factors in their families such as improving their own

wellbeing and reducing parent perceptions of child behavioural difficulties.

Keywords: *risk taking, parenting practices, ABCD Parenting Young Adolescent Program, behavioral family intervention, behaviour problems*

A socially-oriented perspective on emotional processing: building on Greenberg's formulation of therapeutic weeping

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Emotional release during the enactment of a corrective interpersonal experience in psychodrama group therapy has been identified as therapeutically helpful for healing painful emotional experience. Greenberg argues that therapeutic weeping is an indicator of allowing emotional pain, and is a transformative process which has general application across therapeutic modalities. This current research investigates the fit between protagonists' experiences in psychodrama and the *allowing and accepting painful emotional experience* model, as operationalised by Foerster and Greenberg (1996). The verification phase of task-analysis method was applied to the psychodrama enactments of nine protagonists (7 female & 2 male, aged 35–60 years). In-session performances were coded using Foerster and Greenberg's (1996) measurement criteria for the four components of their model: articulating maladaptive beliefs, acknowledging secondary bad feeling, allowing emotional pain and accessing needs. In-session performances were charted and these actual performances were compared to Foerster and Greenberg's (1996) hypothesised performance. Resolved (6) and not-resolved (3) cases were compared, using Fisher's exact test (1954). Resolved cases met all Foerster and Greenberg's (1996) criteria and, consistent with their model, only resolved cases met the criteria for therapeutic weeping. However, the sequence of protagonists' actual performances differed from that proposed by Foerster and Greenberg. Furthermore, the emotional release which occurred during the enactment of a corrective interpersonal relationship, which had previously been identified by participants as therapeutically

significant, did not typically meet Foerster and Greenberg's (1996) criteria for therapeutic weeping. These findings offer qualified support for Greenberg's model. However, the variation in the sequence of protagonists' in-session processes suggests that there is an intervening dynamic not described in their model, which facilitates the transition from awareness of secondary bad feelings and maladaptive beliefs, to the process of releasing emotional pain. Possible intervening factors are considered. The findings also support the proposition that the therapeutic agency of emotional release during psychodrama is primarily as a catharsis of integration linked with the experience of a corrective interpersonal relationship, rather than being primarily an indication of allowing emotional pain.

Keywords: *emotional processing, psychodrama group therapy, corrective interpersonal relationship*

A structural model linking commitment to organizational change and change success

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This research examines the linkages between employees' commitment to organizational change and their perceptions of change success and job satisfaction whilst controlling for their tenure in the organization. The organization involved had undergone significant structural reform over a number of consecutive years involving thousands of staff. The nature of the change involved a large number of employees moving into new roles so we expected that job tenure may also influence their perceptions of change success. Using the three-component model of commitment to organizational change, we analyzed the ability of the three commitment to change variables (affective, continuance, and normative) to directly and indirectly explain perceptions of change success in three successive organizational surveys. The data were obtained from a large public sector organization that established as a result of a restructuring and amalgamation of corporate services within a State Government. The number of respondents

varied each year from 2549 in the first year, to 2737 in the second year and 2595 in the third year. A structural model was specified using Amos with three models estimated simultaneously in which all parameters were allowed to vary. The strongest predictor of change success across all three years was job satisfaction followed by affective commitment to change. Continuance commitment to change and normative commitment to change were only very weakly related or not related to change success. Tenure was negatively related to change success at all three times. Job satisfaction partially mediated the link between affective commitment to change and change success. The structural model was reasonably stable across the three years and highlights the important role that job satisfaction plays in the process of implementing large-scale organizational change. Other issues to be considered include the potential moderating role of tenure, job level and gender as these have been proposed as moderators of the way employees respond to and cope with organizational change.

Keywords: *organisational change, commitment, job satisfaction, change success*

A survey of Chinese college students' career planning

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This study tries to reveal characteristics of Chinese college students' career planning, and to find factors affecting their career exploring behaviors. 336 college students attended the survey (male = 130, female = 206; mean age = 20.56), and they were from four grades. College Students' Career Development Inventory was utilized, consisting of four subscales: career action, career exploring, career decision making, career estimation and regulation. Multivariate analysis showed that main effect of grade is significant. Scores of fourth grade on estimation and decision making are higher than that of second and third grade. On career behavior, scores of first grade was higher than other grades. Scores of fourth grade on career exploring is higher than other grades. Students

majored in liberal arts had high scores in career estimation and regulation than majored in natural science. The students who have been trained in career planning had high scores in career behavior. The students who came from rural areas had high scores in career behavior than those from urban area. Those who had working experiences had high scores in career exploring than those having no experiences. It was concluded that: differences of career planning are significant between grades; significant differences of career planning also existed among students who are different in majors, working experiences, and career trained experiences.

Keywords: *college students, career planning, China, career exploration*

A systems approach to analysis of sheep farming accidents

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Farm accidents have major human and financial costs. While much research worldwide has identified numerous risk factors contributing to these accidents, farming work and contexts vary widely. According to systems theory, different combinations of factors are likely to predict different accidental injury outcomes. Thus more detailed understanding of the links between accidents and their specific task and associated system factors would enable development of interventions targeted directly at the relevant risk factors and so less wasteful of resources and more meaningful to farmers, increasing likelihood of safety compliance. This study aimed to identify the specific risk factors for accidents in North Canterbury sheep farming by providing a systematic description of the work, identifying the nature and incidence of accidental injuries, linking these accidents with specific tasks and identifying contributing system factors according to Sanders and Shaw's (1988) Contributing Factors to Accident Causation (CFAC) model. Interviews with experienced farmers informed a hierarchical task analysis of the work. Further interviews with 26 owner-operator sheep farmers then sought information about

accidents occurring during each of the identified task types and about contributing factors. Results were analysed qualitatively and quantitatively. Sheep farming was found to involve four main tasks (feed provision, property/equipment maintenance, stock trading and stock management). Most of the reported accidents (27/35) occurred during just nine of the 47 identified subtasks. The majority of accidents involved motor vehicles or stock but not all task types involving stock or vehicles resulted in accidents. Injury type was also clustered according to task. When the contributing factors identified were mapped to the CFAC model, the most frequent were worker/coworker factors ($n=24$), work factors ($n=20$) and management factors ($n=12$). The findings of this study provided the first systematic description of New Zealand sheep farming work and contributing factors to accidents during specific tasks, suggesting targeted, meaningful interventions to improve safety compliance.

Keywords: *farm accidents, interventions, risk factors, safety*

A talent retention strategy framework for retaining graduate interns in a south African information, communication and technology Company

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Talent retention is an important topic of debate in the Information, Communication and Technology (ICT) sector in South Africa, given the context of a skills shortage, the relative scarcity of specialist employees and the mismatch between the supply from higher education institutions and the demands of the ICT workplace. As a result, organisations invest in graduate internship programs to attract and retain high calibre graduate interns. The main objective of the research was to determine whether a graduate internship program, as a national skills development strategy, contributed to the retention of graduate interns in a South African Information, Communication and Technology (ICT) Company. An exploratory, ex post facto research design was followed using a

combination of quantitative and qualitative data gathering techniques. Surveys were administered among a purposive selected sample of graduate interns ($N=79$) and mentors ($N=39$) in a South African ICT company. The surveys measured soft and technical skills training, mentorship role, turnover intention and general program information. Open ended questions were used for the triangulation of results. Results overall showed that the graduate internship program contributed to the employability and retention of graduate interns. On average, the graduate interns indicated that the program training contributed most to business etiquette, conflict management, problem-solving, self-management and goal-directedness soft skills. Combined, the participants identified verbal communication, self-motivation, teamwork and goal directedness as the most important soft skills for graduate employability. Results further showed that the technical skills training contributed to a large extent to the employability of the graduate intern. Practically significant relationships were found between technical skills training, mentorship, program need and the graduate intern's intention to quit the internship program. Practically significant relationships were also found between mentorship, program need and the mentor's intention to employ the graduate intern. The research concludes with a retention strategy framework in guiding the implementation of a graduate internship programme in the ICT sector. It is of great value for companies to put strategies in place to ensure that they retain new graduates if they are suitable, skilled and respond to on-the-job training.

Keywords: *talent retention strategy, graduate, South Africa, training*

A virtual tabletop workspace for upper-limb rehabilitation in traumatic brain Injury (TBI): A within-group evaluation

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The aim of this study was to evaluate the effectiveness of a table-top virtual reality (VR)

based system (called Elements) for rehabilitation of upper-limb function in patients with Traumatic Brain Injury (TBI). Participants were nine patients with severe TBI (5 male, 4 female), aged from 18 to 48 years ($m=33$ years). All were recruited at the Epworth Hospital, Melbourne. The median PTA was 70 days (range 28 to 630 days). The VR system consisted of a large 42-inch tabletop LCD, camera tracking system, tangible user interfaces (i.e., graspable objects of basic shape), and software. There were two modes of user interaction—goal-directed and exploratory, both using augmented feedback. The former were reach and place tasks, cued from within the virtual environment, while the exploratory tasks were a suite of tools for composing with sounds and visual feedback, via object manipulation. A within-group research design was employed with three time points: Pretest-1 and Pretest-2, conducted four weeks apart, and a Post-Test. Training consisted of 12 one-hour sessions. All patients maintained normal physical therapy throughout the study. Upper-limb performance was assessed using both system-rated measures, recorded automatically (movement speed, accuracy, and efficiency), and standardized tests (Box and Block Test, MAND nut threading, and Neurobehavioral Functioning Inventory—NFI). Results of planned comparisons revealed little change in performance over the pre-test period; the only significant change was an increase in movement speed. Comparison of (average) pre-test and post-test performance showed significant training effects (each $p < .01$), with large effect sizes on all measures with the exception of nut threading on the MAND. The present findings support an earlier case-study assessment, further demonstrating that training on the Elements system can facilitate motor learning in TBI patients. These results suggest that VR-based techniques are a viable adjunct to conventional physical therapy in the rehabilitation of TBI.

Keywords: *traumatic brain injury, rehabilitation, virtual reality*

Absence makes the heart grow fonder: A study into the possible causes of increasing absenteeism in part time flight attendants

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Full time longhaul flight attendants for a major international airline, who voluntarily moved to part time contracts, have a higher sickness and absenteeism level than their full time colleagues. The unique employment conditions of the cohort enabled a reduction or elimination of confounding variables identified in previous part time employee research. This mixed methods research utilised thematic analysis and Q methodology to investigate the differing lifestyle priorities of a group of longhaul flight attendants. The epistemological debate regarding mixed methods was investigated as part of the research, with thematic analysis used to gain an in depth understanding of full time and part time employee perspectives. Thematic analysis also generated 69 statements for the Q methodology ($N=21$) with PCQ computer software utilised for factor analysis. Four factors were identified. Results indicate that the full time flight attendants within the cohort have stronger commitment and engagement with the organisation dependant on their seniority, length of service and level of autonomy, in line with the literature. Indications are that the most engaged full time employees also invested the most effort in remaining connected to the organisation during their days off. All of the established part time employees identified onto one factor indicating significantly different priorities within their psychological contract and differing attitudes towards the provision of emotional labour. The analysis indicates that the length of time disconnected or detached from the organisation may well contribute to the higher levels of absenteeism with the anticipated or perceived effort involved in providing emotional labour being a significant factor. This research gives an in depth understanding of the possible causes of absenteeism within part time employees delivering emotional labour, raising the question of the necessity for a differing management style, contracting and level of engagement to meet differing expectations. This research raises the question that, contrary to the literature, part time employees may have a different priority order within their psychological contract and employers may need a different approach when trying to engage and motivate these employees.

Keywords: *absenteeism, flight attendants, part time, emotional labour*

Abusive leadership and hostile personality. Do leaders high on trait anger target subordinates low on trait anger?

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Both individual traits and situational stressors have been theorized as antecedents of destructive leadership behaviors, going back to the inevitable person-situation debate in psychology. Yet empirical studies investigating why leaders expose subordinates to abuse and intimidation are scarce. The aim of the present study is threefold, 1) to investigate if trait anger and trait anxiety of leaders predict abusive supervision as reported by subordinates, 2) if destructive leaders target subordinates being either low on trait anger or high on trait anxiety, and 3) to investigate if the predicted relationship between personality and abusive leadership stands when controlling for situational influence in the form of role stressors. A survey was conducted in 89 crews ($n= 180$) working on Norwegian coastal ferries where captains reported their own trait anger, trait anxiety and experienced role stressors, while their subordinates evaluated their captains leadership behaviors as well as describing their own trait anger, trait anxiety and experienced role stressors. Data was analyzed with multilevel analysis, analyzing both within and between level variance and with gender and tenure in crew as control variables. The results showed that abusive leadership as reported by subordinates was related to trait anger as reported by the captain. In addition, subordinate trait anxiety and experiences of role conflict was related to their reports of exposure to abusive leadership. In addition, an interactive effect was found between trait anger in captains and trait anger in subordinates. Combinations of high trait anger in captains and low subordinate trait anger is related to more reports of exposure to abusive supervision. The present study shows that leaders who expose their subordinates to abusive supervision are characterized by high levels of trait anger, while the situation influence

did not matter much. Furthermore, some subordinates seem to be more in danger of such experiences than are other. Particularly exposed subordinates are those who themselves are low on trait anger, indicating that angry leaders may target subordinates who are unable or unwilling to retaliate in kind. In addition, distressed and anxious subordinates seem to be particularly vulnerable. Prevention should therefore address both leaders and subordinates, as well the combination of the two.

Keywords: *individual traits, situational stressors, destructive leadership, trait anxiety, trait anger*

Academic wear-down and attitude toward school among Iranian university students

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From a social constructivist perspective, learning is a life-long activity of construction, and effective educational programs and processes are those rooted in the psycho-socio-cultural realities constructed by the individual. Nevertheless, in formal education the learner may experience a sense of wear-down, because of some misconstructions that may have occurred in his/her attitudes toward school. The learner may wear down physically, cognitively, affectively, and behaviorally, and in doing so, the attitudes, with three cognitive, affective, and behavioral dimensions, can play a determining role. The aim of this research has been to find a way of predicting and preventing the wear-down from taking place by initially showing the relationship between the two constructs and paving the way for a program of reconstructing attitudes. Given the nature of the inquiry, each of three groups of participants will be measured once on the two constructs in an academic setting. Participants would be junior year university students in the Arts, Social Sciences, and Sciences at an Iranian University in Tehran where competition to attend university is high. The measures used in the study include an attitude scale consisting of items in three sub-categories, and a questionnaire on the academic wear-down (AWD) consisting of four sets of items. These are being constructed based on the

theoretical basis of the study, and will be tested for reliability with the help of other groups of students. The data, once gathered, will be assumed to be interval in order to pave the way for their processing using Pearson's method of assessing the correlation between two constructs and Fisher's analysis of variance. It is expected that the correlation between academic wear-down and attitude toward school would be positive and high, while the difference between three groups of participants in both characteristics would be significant. Furthermore, there may be differences between different dimensions of both variables giving hints as to how to intervene and remedy the problem. The problem of academic wear-down in Iranian universities can be reduced if the learners' attitude towards school is checked and reconstructed to a level of positivity that would enable the students to pursue their academic goals more enthusiastically and productively.

Keywords: *academic wear-down (AWD), Iranian students, attitudes*

Acceptance and commitment therapy for psychosis: avoidance, fusion, preoccupation and delusional distress

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In spite of advances in pharmacological and psychological treatments for schizophrenia, it can be difficult to eliminate psychotic symptoms such as hallucinations and delusions. This has led to an important therapeutic aim being the reduction of symptom-related distress. Cognitive Behavioural Therapy (CBT) has targeted distress by modification of the content of delusional and associated beliefs. However, belief modification, especially with delusions held with strong conviction, is not always successful. An emerging alternative psychological therapy is Acceptance and Commitment Therapy (ACT; Bach & Hayes, 2002; Gaudiano & Herbert, 2005). Designed to be applied across a wide range disorders, ACT aims to reduce symptom-related distress by targeting cognitive processes which perpetuate the dominance of distressing thinking over desired behaviours. These include cognitive

fusion, ruminative preoccupation and attempted experiential avoidance. ACT aims to help the person detach from these maladaptive thinking processes by taking their thoughts less literally, developing skills in mindfulness, and undermining experiential avoidance. These therapeutic strategies appear primarily to be targeting delusional preoccupation, as opposed to delusional content. This paper reports on pre-therapy data from a randomised controlled trial of an ACT intervention for psychosis to examine the role of these cognitive processes in determining delusion-related distress. 40 participants with a diagnosis of schizophrenia and medication-resistant positive psychotic symptoms were recruited from mental health services. Measures completed included symptom severity (Positive and Negative Symptom Scales); delusional content, preoccupation, conviction and distress (Peters Delusion Inventory); cognitive fusion (Thought Action Fusion Questionnaire); and experiential avoidance (Acceptance and Action Questionnaire). A model was tested in which delusion-related distress is determined by delusional preoccupation and conviction, moderated by experiential avoidance. Cognitive fusion was hypothesised to be predictive of delusional conviction. Data supported this model, finding that delusion-related distress was more strongly associated with delusional preoccupation than delusional content or conviction, and that this relationship was moderated by experiential avoidance. Cognitive fusion predicted the degree of delusional conviction. These results support delusional preoccupation as a target of psychological intervention in schizophrenia, and suggest that the cognitive processes specifically targeted by ACT are important in contributing to the severity of delusions.

Keywords: *psychotic symptoms, distress, acceptance and commitment therapy, schizophrenia*

Accidental risk judgements and choices between private and public transportation

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The core aim of the present study was to examine the role of risk perception related to accidents and injuries in choices between private and public modes of transportation. An additional aim was to examine the relative importance of perception of risk related to transportation with other risk-related factors. The results are based on a mailed self-completion questionnaire survey carried out amongst a representative sample of the Norwegian public aged from 18 to 65 years ($n = 1864$). The data collection was carried out during October to December 2008. The results have shown that perceived control related to private modes of transportation, knowledge about safety and trust in authorities seem to be more important for choices between private and public modes of transportation than risk perception. Severity of consequences was found to be insignificant for transport mode choices. It may be that conclusions of previous research about the role of consequence judgement for precautionary action and demand for risk reduction may be misleading.

Keywords: *risk perception, transport*

Acquiring two new languages: Comparing a picture-mediated method and a word-mediated method

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In this study, we aimed at evaluating the effects of two learning methods (picture-mediated vs. word-mediated) on the vocabulary acquisition of two foreign languages: English and German. In addition, we investigated the effects of word status (cognates vs. non-cognates) and test sessions (immediate vs. delayed). 40 concepts were presented both in English and German (in different learning sessions) to 229 Italian children from fourth and eighth-grades. Half of participants were exposed to the “word-mediated method” (Italian words paired with the corresponding foreign words), while the other half were exposed to the “picture-mediated method” (pictures paired with the corresponding foreign words). For each language, participants performed 4 test sessions:

Immediate Test 1 at the end of the first learning session; Immediate Test 2 at the end of the second learning session. Delayed Tests were administered one week after Immediate Test 1 (Delayed Test 1), and one month after Immediate Test 2 (Delayed Test 2). The picture-learning method produced a better performance than the word-learning method, but this effect was modulated by cognate status, age of learning, and test session. In particular, a stronger superiority of the picture-learning method in the latter than in the first session indicated that the effects of the picture-mediated learning method may be fully appreciated when the learning sessions were spaced in time. Furthermore, cognate status interacted with the learning method for older children, indicating that the word method was particularly effective for cognate words. Finally, for both languages and for both age groups, cognates status interacted significantly with test sessions. The superiority of the picture-mediated method compared to the verbal one suggests that the link between the structural description of an object, its visual representation, and its name is more efficient than the link between the corresponding L1 and L2 names. From an educational perspective, this study suggests that a) reliance on, and strengthening of, the link between the concepts presented as pictures or real objects and their names may help in vocabulary learning, and b) cognate and non-cognate words should be taught differently to maximize vocabulary acquisition.

Keywords: *picture-mediated learning method, word-mediated learning method, vocabulary acquisition, foreign languages, performance*

Acting upon dynamic speed limits: Is change blindness involved?

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Dynamic speed limits are the latest traffic management pilot in the Netherlands. Being dynamic they can vary during the day. Previous studies showed difficulties with noticing small changes, also called change blindness. These change blindness studies have mainly been

conducted using static scenes or changing irrelevant objects or changing objects that are perceived as static. But what happens if the information changed is relevant for the task, is perceived as dynamic and continuously in a dynamic scene? On a Dutch freeway dynamic speed limits were tested that increased from 100 km/u to 120 km/u at moderate traffic conditions. They were shown on rotation signs next to the road and varied several times a day. Loop data was used to measure average speeds of passing cars every minute and compared with the dynamic speed limits displayed. To minimize side-effects only data from speed limit increases for over an hour were used. The average speed before a switch is 107.7 km/u, meaning that drivers are driving on the pilot route for approximately three minutes before passing the detector loop. Drivers passing the loop did not react immediately on an increase in speed limit. On average it took three to four minutes before car drivers increased their speed. After that driving speed starts to increase significantly. Drivers in the middle and left lane are quicker to act on new speed limits than drivers on the right lane. Three minutes of non-response equals the amount of time it would take the last car driver that could have seen a 100 km/u sign to pass the detector loop. This may mean change blindness is involved. Drivers who may still have seen 100 km/u signs before the switch do not act upon the new speed limit. Subsequent drivers who never saw the 100 km/u sign do; they never saw information that changed. It is suggested that the observed quicker reaction of drivers in the middle and left lane may be due to their more active driving styles., where these drivers are often seen overtaking other vehicles. This driving style may increase situation awareness making them more sensitive to changes in their environment.

Keywords: *dynamic speed limits, traffic management, change blindness*

Activity restriction as a mediator of the relationship between ageing-related physical decline and mental health: A report from the New Zealand longitudinal study of aging

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Prior research indicated that restriction of normal activities is an important factor in poorer mental health outcomes (Williamson, 2000). The present study aims to investigate the relationship between ageing-related physical decline in mental health, and how this relationship is mediated by restricted routine activities. Data were drawn from the New Zealand Longitudinal Study of Aging (2006-2008), with complete data available for 2170 participants (Mean age = 61.24 years; $SD = 4.56$). Self-rated health as compared to last year was used to assess ageing-related physical decline and mental health was measured by the SF 36. Activity restriction was assessed by the 16-items attributed to restricted normal activities adapted from the Physical Component of the SF-36. Several sociodemographic factors were also measured. Mediation analysis using multiple regression equations indicated that ageing-related physical decline was a significant longitudinal predictor of decrements in mental health, after statistically controlling for various sociodemographic factors and baseline scores of the outcome variable. Results also indicated that this relationship was partially mediated by restricted activities (Sobel's test: $Z = 8.72, p < .01$), suggesting that ageing-related stressors such as physical decline undermines mental health by disrupting routine normal activities. Our findings suggest that activity restriction is a major factor in poorer mental health outcomes in older adults. As ageing-related physical decline increases, so does activity restriction which, in turn, results in decrements in mental health over time. Interventions focusing on promoting manageable activities considering individual differences in psychosocial resources and/or using compensatory control strategies can be developed to reduce activity restriction. For example, programs designed to foster strategies such as social support resources and social integration (e.g., free or low-cost bus service to visit friends and family, more participatory activities arranged in community halls etc.) may improve mental health among the elderly with perceived low social support.

Keywords: *ageing-related physical decline, activity restriction, mental health, stressors*

Adaptive personality assessment for unsupervised pre-screening

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Conventional Big Five orientated personality inventories (normative and ipsative) have proven their effectiveness for applicant screening under supervised conditions. However, these types of instruments are very prone to targeted biased responses which make them less effective in unsupervised conditions. Furthermore, in order to establish sufficient reliability these instruments are very time-consuming for participants which causes problems in acceptance under various circumstances. With adaloc™ a new method is presented which enables an adaptive personality assessment online. It is demonstrated how the adaloc™ method allows bias-robust assessment in a fraction of the test time of conventional methods. Results from an international deployment of the adaloc™ method for unsupervised online pre-screening of undergraduates ($N=95,314$) are presented along with results from in vitro studies on the effect of targeted biased responses.

Keywords: *big five model of personality, applicant screening, biased responses*

Adolescent girls' responses to partner abuse prevention training: risk-sensitivity, perceived self-agency, and victim-blaming

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This study formed part of an evaluation of a group-based training program designed to reduce adolescent girls' vulnerability to chronic emotional, social, and physical partner abuse. The objectives of the program are to equip girls with the motivation and self-efficacy to resist the development of three "slippery-slope dynamics" in their current and/or future couple-relationships. Participants are given opportunities to predict possible harmful outcomes of each dynamic and then to explore ways in which five types of "warning-sign behaviour" can lead to the establishment of one

or more of these dynamics. Participants also prepare and rehearse scripts for non-aggressively discouraging warning-sign behaviour by a partner. The study employed a repeated-measures design involving 15 groups of adolescent girls aged 13 to 17 years; 147 girls in total. This paper reports on attitudinal shifts observed during the program, as gleaned from measures taken immediately prior to the commencement of the training, immediately following the awareness-focused component, and immediately following the skills-focused component. Overall, risk-sensitivity increased for all categories of warning-sign behaviour, most substantially for dominance-seeking and possessive behaviours, following the awareness-raising component; it further increased following the skills-training component. Perceived importance of monitoring partner behaviour and self-confidence to positively influence treatment by a partner both increased after each component, but a small number of participants reported lower self-confidence following the skills-focused component. Similarly, while victim-blaming attributions decreased for most participants, some reported stronger victim-blaming attributions following the program. Through follow-up focus groups and subsequent hypothesis-driven analyses, a number of insights were garnered relevant to youth-targeted partner abuse prevention. These include the importance of (a) looking beyond self-confidence as an indicator of girls' capacity to resist abusive dynamics, (b) promoting harm-minimising options other than relationship termination for responding to warning-sign partner behaviours, in order to minimise attitudinal resistance and maximise risk-sensitivity, (c) allowing ample time to practice assertive responses to a variety of real-life scenarios, in order to maximise self-efficacy, and (d) continually emphasising the logic of personal accountability only for harms perpetrated by oneself.

Keywords: *adolescents, females, partner abuse, prevention training, self-efficacy*

Adolescents vocational indecision and problem solving

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The purpose of the present study was to investigate the relationship between vocational (in)decision and problem solving. The study involved different variables (e.g., vocational, personality and demographic). Specifically we refer to anxiety, self-esteem, locus of control, vocational identity, generalized indecision, gender, and grade in school. The present research is a non-experimental correlational study, based on a sample of 357 students, attending the 9th and 11th grade, both public and private middle and secondary schools of the center region of Portugal. The instruments used were: A demographic questionnaire; the Indecisiveness Scale (IS; Frost & Shows, 1993); the Rosenberg Self-esteem Scale (RSES; Rosenberg, 1965); the My Vocational Situation (MVS; Holland, Daiger & Power, 1980); the Trait Scale of the State-Trait Anxiety Inventory (Spielberger, Gorsuch, Lushene, Vagg & Jacobs, 1983); The Vocational Certainty Scale (ECV; Santos, 1997); the Internal-external Locus of Control Scale (IE; Rotter, 1966); and the adaptation of the Problem Solving Inventory (PSI; Heppner, 1988). Results of the hierarchical regressions revealed that the best predictors for Vocational Certainty were Vocational Identity followed by the problem solving variables (with particular emphasis on the Confidence in Problem Solving). Results also suggest that personality variables such as self-esteem, anxiety, and generalized indecision, constitute factors that explain a considerable part of the variance on the three dimensions of problem solving (confidence, approach/avoidance, and personal control). Vocational variables also have a significant contribution to the explanation of problem solving, with the exception of the approach/avoidance dimension. It is noteworthy to point out that from all the studied variables, problem solving dimensions were the ones that showed most explicative power of the variance on vocational indecision. Implications for vocational counseling were taken and were suggested future studies to deepen the

knowledge on the interface between vocational (in)decision and problem solving in adolescents.

Keywords: *problem-solving, vocational indecision, anxiety, self-esteem, adolescents*

African-American male athletes: An examination of a conflicted sense of masculinity as a source of psychological distress

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This study explores both masculinity and gender role expectations in African American collegiate level male athletes and ways in which masculinity and athletic identity are potential sources of distress/conflict across roles. Gender role conflict has been significantly correlated with lower self esteem, higher anxiety and depression, psychological distress and negative attitudes toward help seeking. Literature suggests the experiences of African American male athletes are unique and include inadequate educational preparation and racial isolation in the collegiate setting. Also, they include difficulty negotiating multiple roles in the family, academics and workplace, athletics, and relationships. Consequences include decreased sports performance, potential conflict regarding bridging various cultural dynamics (including those associated with AA culture as well as the dominate culture), and adjusting their identities across situations (dualism) to maintain their perception of masculinity and athletic identity to receive acceptance from peers, coaches, parents, and their community. Participants were chosen from a Historically Black, College/University (HBCU) athletic department and were members of an identified varsity athletic team. The following assessments were completed: MARS, GRCS, RCS, BSI-18, and AIS. Pearson r correlations were conducted to calculate the degree to which these variables (dualism, GRC, and masculinity) represent significant relationships. Multiple regression analyses were then performed to ascertain additional data regarding relationships between dualism, gender role conflict, and perceptions of masculinity as predictors of psychological

distress in African American male athletes. Results from this project suggest strong relationships regarding socio-cultural factors and gender role conflict as contributing to the psychological distress of African American male athletes. Conclusion data specifically address interventions and counseling models that will support increased sensitivity regarding the intersection of masculinity, athletic identity, gender role conflict, and sources for distress in this and other male collegiate level student-athlete populations.

Keywords: *masculinity, gender roles, athletes, African American, gender roles*

Afterschool predictors of behaviour in young school-aged children

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There is growing recognition that the hours after school are an important context for children's social, physical and cognitive development. While there has been considerable research into adolescent's time use, there has been much less interest in school-aged children's experiences. These experiences after school afford children opportunities for development and can also influence their behaviour. Children's behaviour is an important predictor of their future successes or failures. Adaptive behaviour allows children to form better relationships with peers and teachers, participate more in classrooms and do better in school while problem behaviour in young children is a main predictor of school failure, school dropout and later delinquency. This study examined the relationship between children's after school care arrangements and extra-curricular activities and behaviour to help uncover factors that promote positive children's behaviour. Both teachers and parents of children in Prep to Year three from seven schools in middle to high socio economic status (SES) areas in a regional city were asked to provide responses for this study. Mothers of 906 children gave details of their child's current care arrangements, extra-curricular activities as well as other demographic details. The Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997) was used to measure children's behaviour

and the Raising Children Checklist (Shumow, Vandell & Posner, 1998) was used to measure parenting style. Low scores on the SDQ indicate normal behaviour, while high scores indicate borderline or abnormal behaviour. Teachers provided behaviour ratings using the SDQ for 693 children. However, only 337 teacher surveys could be matched to the parent surveys. Agreement between teacher and parent behaviour reports was moderate $r=.34$. According to parent reports, lowest behaviour scores were associated with participation in two or more extra-curricular activities for duration of 90 to 180 minutes, parental care before entry to school and authoritative parenting. According to teacher reports the lowest behaviour scores were associated with parental care after school and before entry to school. While extensive early childcare centre care and full-time afterschool care were associated with the highest behaviour scores the majority of children with these care arrangements were still within the normal range of behaviour.

Keywords: *afterschool, behavioural predictors, school-aged children, extra-curricular activities*

Age group differences in self-reported road rage perpetration and victimization

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This study examined whether the predictors of self-reported road rage perpetration and victimization vary across age groups. Based on data from a general-population telephone survey conducted from July 2002 through June 2005, three groups of drivers were examined: 18-34 year olds ($n = 1522$), 35-54 year olds ($n = 2726$), and 55 years of age or older ($n = 1883$). For each age group sample, logistic regression analyses examined self-reported road rage perpetration and victimization in the last 12 months by measures of driving exposure, binge drinking, cannabis use, and drinking-driving, while controlling for demographic factors. The prevalence of road rage perpetration within the past year was highest for the youngest age

group (51%), followed by the middle-aged group (37%), and then the oldest age group (18%). The same pattern of results was found for prevalence of road rage victimization (54%, 47%, and 31%, respectively). Controlling for demographic factors, the predictors of perpetration were generally consistent across the age groups. The logistic regression model for the youngest drivers revealed that those who reported stressful driving, binge drinking, and cannabis use had significantly increased odds of reporting road rage perpetration. For middle-aged and older drivers, stressful driving, driving on busy roads, cannabis use, and driving after drinking were associated with perpetration. In addition, increased mileage contributed to perpetration in the oldest group. The findings for road rage victimization were similar. The logistic regression model for the youngest age group identified stressful driving, cannabis use, and higher annual mileage as being associated with victimization. For the oldest age group, these same variables were significant predictors of victimization, in addition to driving on busy roads. The logistic regression for the middle-aged group identified the same predictors as that of the oldest age group; however, interestingly driving after drinking was found to predict lower victimization among middle-aged drivers. Although the prevalence of road rage perpetration and victimization declined with age, the factors that contributed to road rage remained generally stable across the lifespan. The results suggest potential areas for intervention that may prove effective across all age groups.

Keywords: *road rage, drink driving, age differences, victimization*

Aggression Replacement Training (ART): An Australian youth justice evaluation

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Aggression Replacement Training (ART) is a multimodal, cognitive-behavioural intervention for aggressive youth. Outcome studies from the US, UK, and Europe indicate that ART is one of the most effective anger management programs

in treating aggressive youth. The aim of this evaluation study was to investigate the effectiveness of ART among aggressive juvenile offenders (aged 17 to 22 years) at an Australian youth justice custody centre. The results of an initial pilot study with 5 young offenders indicated overall support for the effectiveness of ART. Participants in the main study were 20 young offenders from the same youth justice centre. A repeated measures design was used with pre, post-, 6-month, and 24-month post assessments. Measures included social problem solving, aggressive behaviours and thoughts, criminogenic cognitive distortions, and impulsivity. Results showed clinically and statistically significant reductions in self-reported aggression, cognitive distortions, and impulsiveness and improved social problem solving skills with moderate to large effect sizes. Contrary to expectations, custody worker reports of participants aggressive/antisocial behaviours did not vary significantly at the six month follow-up. This measure also failed to reach clinical significance at any time point, suggesting issues with scale validity. Despite efforts, a waitlist comparison group was not obtained. Notwithstanding the methodological limitations, the present study provided strong support for the application of ART with aggressive Australian youth. Some of the key implications of these results include the cultural suitability of an American based training program to an Australian youth justice population and the apparent maintenance of treatment gains at 2-year follow-up, beyond the treatment setting. The results also supported the social-learning principles and cognitive-behavioural procedures underpinning ART for this group of high risk youth.

Keywords: *aggression replacement training (ART), Cognitive behavioural therapy, juvenile offenders, anger management*

Aggressive children at school: Communication patterns and styles of responses to frustration

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In the investigation related to the field of communication skills in the family and school situation, (mother/father and child relationship; peers and teachers), we studied the patterns of communication and of conflict resolution that are related to certain variables of adaptation and styles of response to frustration in Spanish children. The sample comprised 124 adolescents (65 boys and 59 girls) of between 12 and 15 years old, with an average age of 13. The aim of the study was to examine the relationship between the factors of the Patterns of Communication and Resolution of Conflict Questionnaire (CPC-RC) (Armas-Vargas, E., 1996-1998) among peers and teachers, with the three styles of response to frustration of the PRF test (Resolutive, Self-Punishing/Self-Harming and Aggressive). Questionnaire A (CPC-RC teachers) assessed five factors of communication on how students perceive communication with their teachers: 1) Facilitative and Resolutive; 2) Reasoned and Empathetic; 3) Explicative and Taking into Account Opinions and Decisions of Others; 5) Difficulty in Reaching Agreements. Questionnaire B (CPC-RC peers), assessed four factors of communication on how students perceive communication between themselves: 1) Explicative and Empathetic; 2) Active Listening and Allowing Others to Speak; 3) Reasoned and Understanding; 4) Difficulty in Reaching Agreements. The students who scored higher in solution to conflict tended to be those who perceived their teachers with a facilitative and resolute style of communication ($r=.43$; $p\leq.001$). Conversely, difficulty in reaching agreement with their teachers correlated positively with aggressive responses ($r=.30$; $p\leq.001$) and self-punishing ($r=.28$; $p\leq.01$) among the children. In communication among peers, difficulty in reaching agreements also correlated positively with the aggressive ($r=.29$; $p\leq.01$) and self-harming ($r=.24$; $p\leq.025$) response styles, and negatively with the resolute response ($r=-.36$; $p\leq.001$). Children that tend to score higher in resolving conflict are those that perceive their teachers and peers with the ability to communicate (helping to reason, giving and asking for explanations, taking into account opinions and decisions of others, listening and allowing others to speak and reaching agreements).

Keywords: *communication skills, family, school, conflict resolution, adaptation*

Alexithymia in Somatoform Disorders

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The aim of the present study was to determine Alexithymia in patients suffering from somatoform disorders, and in their matched normal controls, in the Indian context. Therefore, study examined the effect of age, gender, and education on Alexithymia in an Indian sample. Adult patients ($N=102$) diagnosed as Somatoform disorder (ICD-10, WHO, 1992), by a qualified psychiatrist were included in the study. Normal controls ($N=116$) were statistically comparable with patients on age, gender, education, occupation, marital status, family income, and residential area; and scored less than three on GHQ-12 (Goldberg et. al, 1997). The two groups were assessed on 20- item Toronto Alexithymia Scale (Pandey, Mandal, Taylor, Parker, 1996), and rendered to analysis using t-test and ANOVA on the total as well as sub-factors scores. Somatoform patients were significantly more Alexithymic than the matched controls, and the difference persisted on all the three factors. Female patients were more Alexithymic than males; exhibiting specific difficulty in identifying (factor 1) and in describing emotions (factor 2). There were no gender differences in Alexithymia in the normal controls. Alexithymia was equally prevalent in the four age categories, while educational based differences were present in both the patient as well as the normal group. In patients Alexithymia was more evident in joint families as compared to nuclear families, but controls showed no such differences. Alexithymia as a personality construct characterized by difficulty in differentiating and describing subjective feelings, and by a cognitive style which is externally oriented rather than expressive of inner fantasies and drives (Nemiah, 1977), has found repeated theoretical and empirical validity. Somatoform disorders are marked by personal morbidity, and immense burden on family and health care facilities. By establishing Alexithymia as one of the core aspects in somatic symptoms, psychological interventions for enhanced emotional sensitivity and communication in client can be planned to enhance self reliance

and independence in thought and action. Consequently, reliance on physical symptoms as a mode of communication is likely to reduce or even disappear.

Keywords: *Alexithymia, somatoform disorders, age, gender, education*

Alterations in different types of memory in poliaddicts

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In past years, consumption of addictive substances it is increased considerable in a world level. Our interest consists in study and analyzes the alterations that produced the combined use of different groups of poliaddicts. The aim of the current study was to analyze the neuropsychological disorders in different types of memory in poliaddicted population. The study was exploratory, descriptive and transversal. A total of 200 subjects were selected, 99 of whom were poliaddicts. Both groups were gender and age matched (between 18 and 77 years of age). The poliaddicts were classified according to the type of substance used. Thus three subgroups were formed: 1) Cocaine, amphetamine and hallucinogen users; 2) Alcohol and hallucinogen users; 3) Alcohol, hallucinogen, cocaine and amphetamine users. They also were classified according of the level of addictions. The statistical analysis show significant differences in the tasks performed by the evaluated subjects. The data showed that, when comparing the tasks of the control group with those performed by the three subgroups of poliaddicts, there are significant differences in the tasks requiring the participation of visual-verbal and audio-verbal retentions mechanisms. The type of consumption is a significant variable in

neuropsychological evaluation tests. The analysis of the results contributes significantly to the understanding of the organization of cognitive skills. Consumption of addictive substances causes alterations in different types of memory. Neuropsychological alterations are related with type and with long years of consume of addictive substances.

Keywords: *substance use, poliaddicts, neuropsychological disorders, memory, addiction*

An application of rTMS: The role of the anterior temporal lobe in associative stereotypes

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Brain stimulation via repetitive transcranial magnetic stimulation (rTMS) is yielding interesting results in diverse cognitive domains. Inhibiting the anterior temporal lobe (ATL) via rTMS appears to have deleterious effects on people's semantic conceptualization. A negative outcome of conceptual association is the overgeneralization or stereotyping of social groups. The aim of this study was to investigate if inhibition of the ATLS via rTMS could reduce implicit prejudice towards Arab people. Forty participants were randomly allocated into 4 groups: right ATL stimulation; left ATL stimulation; control site stimulation; and sham. Participants completed an Implicit Association Test (IAT) that measured the association between Arab people and terrorism, and then underwent 15 minutes of inhibitory rTMS (1Hz) or sham stimulation. They then completed a parallel form of the IAT and a self-report questionnaire including questions about explicit prejudice. On average participants had positive scores indicating a moderate-high implicit bias to associate Arab names with terrorist attributes. Analyses revealed significant differences in scores from pre to post stimulation between the 4 groups ($F_{3,36}=3.57$; $p=0.02$). Both left and right ATL stimulation decreased prejudice scores on the IAT significantly compared to the control stimulation and sham groups ($t=3.19$; $p=.003$). Paired t-tests confirmed that both the RATL and LATL group had significantly lower IAT scores

after stimulation (RATL: $t=3.16$, $p=.01$; LATL: $t=3.42$, $p<.01$). The sham and the control site group had no change in IAT scores post stimulation. The results of the current study demonstrated that LATL and RATL rTMS stimulation was capable of reducing prejudice scores on an IAT. The association of Arab people and terrorist is a current example of an overgeneralization being applied to a people group is the association of Arab and terrorist and is arguably a 'learned' prejudice that may exist without any direct experience. When this concept was weakened via rTMS inhibition of the ATL, people completed the IAT with less bias and therefore produced lower prejudice scores. These findings are consistent with the view that the ATL may be one of the brain areas involved in prejudicial biases, and to conceptual processing more generally

Keywords: *repetitive transcranial magnetic stimulation (rTMS), anterior temporal lobe, stereotypes, prejudice, implicit association test*

An application of the theory of planned behaviour (TPB) to the speeding behaviour of young drivers

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Young drivers are proportionately over-represented in traffic crashes in which death and injury are reported. This fact is reported internationally and consistently over time. Driving in excess of the posted speed limit has been associated with crash involvement, and the higher the speed, the more severe the outcomes when a crash occurs. As theory based interventions have proven successful in different behavioural domains, this research used the Theory of Planned Behaviour (TPB) to produce some understanding of speeding behaviour in young drivers and to identify potential bases for interventions. Participants were vocational education students (both male and female) aged 18 to 24 years ($n = 75$). This research investigated the beliefs and core Theory of Planned Behaviour variables (attitude, norms and perceived behavioural control) in relation to the speeding behaviour of young drivers. Several

additional variables were included in the research. These variables were moral norm, self identity as a safe driver, and a short driving style questionnaire from Deery and Love (1996). A prospective design which enquired about TPB variables up to behavioural intention and expectation at first presentation, and self reported behaviour three weeks later was used to determine the validity of the theory for speeding behaviour. Behavioural beliefs which had been determined in a prior study in a similar population were also measured. Both logistic and standard regressions were used to analyze the data. Logistic regressions revealed significant differences between those that speed and those that do not on a variety of dimensions with satisfactory overall prediction rates compared to other research in this domain. Standard regressions were used to measure expectation to speed as this variable was measured on a Likert scale. The TPB provides a suitable model upon which to base the investigation of speeding behavioural intention/expectation and self-reported behaviour in young drivers with attitude, control and moral norm producing significant increases in the accounted for the variance in intention/ expectation. Differences in the beliefs between those that do speed and those that do not speed provide information for the design of road safety media campaigns/interventions aimed at this vulnerable driving population.

Keywords: *theory of planned behaviour, driving behaviour, speeding, young drivers*

An attempt on semiotic analysis of work-motivation theories

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The paper presents an analysis of the succession of work-motivation theories which reveal a shifting pattern of underlying meanings and ideas. This pattern might be informative on the ways psychologists think about and deal with the immensely complex field of work-motivation. The analysis presented is dubbed as semiotic, as it deals with the meanings of the core concepts of the theories in question. At the same time, it might be understood, as well, as an analysis of ideological foundations of the theories

questioned (for the most part the ideologies considered are the humanistic conception, protestant ethic and man-as-a-machine approach). Through the second part of the twentieth century there arrived a number of work-motivation theories. All of them were, in due course, tested in laboratories and in the field alike, and all of them got some empirical support in the process. Through the years, though, the older theories became gradually less accepted and researched on and the attention of scientists moved to newer conceptions, even if the older ones were not disproved or falsified unequivocally. This succession of work-motivation theories shows a shifting pattern of underlying meanings and ideas. The analysis was commenced upon because of a survey results which contradicted some of the expectations of the more recent work-motivation theories. The pattern of shifting meanings and ideas in the theories of work motivation might be informative on the ways psychologists think about and deal with the immensely complex field of work-motivation. Findings concerning this pattern might be helpful in the future theoretical developments of the field. The semiotic analysis of the theories in question will help to determine, among other things, if the field of work motivation should be studied as a single area or rather as several sub-fields for anyone of which specific theories should be developed.

Keywords: *work-motivation theories, semiotic*

An evaluative synopsis of four related TEACCH-based tertiary preventive outcome studies for Autism Spectrum Disorders

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Research literature indicates that there is urgent need for more tertiary prevention studies in the field of autism worldwide. While the TEACCH approach has shown promising validity there is still a clear lack of controlled international studies. In this study, a synopsis of four TEACCH-based tertiary prevention studies for children and adults with Autism Spectrum Disorders, carried out in Germany, is presented. Study 1 describes the outcomes of a controlled single-

subject social communication training study with a 7-year-old girl living in a residential home; study 2 analyzes the outcomes of a 3-year TEACCH-based intervention in a residential and vocational setting with 3 male adults; study 3 includes the outcomes of a three month follow-up, three full day education and skills parent group training study with 23 parents of 24 children; study 4 evaluates the outcomes of a home program intervention study with a 5-year old boy and his family. The outcome measures of the four studies embrace standardized questionnaires, behavioral observation instruments, and semi-structured interviews. The key results include: (a) the training of social-communicative skills in study 1 resulted in reduced challenging behaviors, enhanced alternative communication skills and improved toilet skills; social acceptance by staff was high; (b) the outcomes of study 2 on average showed a substantial reduction of behavior problems and increased social skills, and a high degree of social acceptance of the TEACCH approach by educational staff; (c) in study 3, the follow-up outcomes of the parent group training were based largely on the perspectives of parents; the training resulted in enhanced parental skills, improved parental health and higher family functioning; (d) the 2-year evaluation of the parent and child home intervention program resulted in enhanced language, communication, and social functioning and improved classroom adjustment of the child, and very positive acceptance of the training by his parents and teachers. Overall, the results suggest some further evidence for clinical and social validity of the TEACCH-approach and are largely consistent with the international literature. Cross-cultural implications for educational and health care sectors are discussed.

Keywords: *Autism Spectrum Disorder, validity, social communication training, tertiary prevention studies, TEACCH approach*

An examination of the influence of perceived job threat, job pressure and work-life balance/conflict among Australian academics

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Research evidence suggests that the psychological strain and work-home conflict increased among academia, where work pressure remains high in a changing academic environment (see for example Winefield, et al, 2008). This innovative research explores the impact of job-stress on work-life balance practices among Australian academics. Drawing on Zedeck's (1992) spill over theory, it was hypothesised that high levels of job stress (job threat stress and job pressure stress) would predict increased levels of work-life conflict, and decreased levels of work-life balance. A further aim was to examine gender differences in work-life balance practices given the limited research in this area. A sample of 139 academic staff employed in Australian universities (higher education and TAFE) participated in this study by anonymously completing an on-line a self-report questionnaire. The instrument used contained measures of work-life balance, work-life conflict and job stress (job threat stress and job pressure stress) that were rated on a five point Likert type scale. A strong, negative correlation was reported between work-life balance and both job threat stress and job pressure stress, where these were also strongly and positively correlated with work-life conflict. Multiple regression analyses demonstrated that job threat stress made the strongest unique contribution to work-life balance and work-life conflict scores, when the variance explained by job pressure stress was controlled. There were no gender differences for work-life balance or work-life conflict. In conclusion, job stress demonstrated a detrimental influence on academics' abilities to balance their personal and work lives, and contributed to increased conflict between their work and personal lives. In order to combat the increasing job stress and work-life problems amongst academics, we suggest that universities consider implementing stress management components (particularly for job threat stressors) into Human Resource Management employee work-life balance programs, and also encourage academics to make use of these initiatives.

Keywords: *work-life balance, job stress, academics*

An examination of the relationship between personality, emotional intelligence, and occupational stress: Results from UAE police

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Most employees experience stress as a normal part of their job but, some workers experience stress more than others, suggesting a role of individual difference in perceiving and dealing with occupational stress (Cimbura, 1999). In the United Arab Emirates (UAE), however, little research has been conducted regarding the validity of personality traits and emotional intelligence in predicting job stress. For instance, the level of job-related stress that police officers working at Abu Dhabi Police feel was found to be high (Tawaiha, 2004). Therefore, the aims of the present study are: (1) to explore the relationship between personality, emotional intelligence and perceived job stress among a sample of police officers; and (2) to identify coping strategies that employed by officers to manage job stress. The sample consisted of 310 officers working at Abu Dhabi Police. Personality was measured using the Arabic version of NEO-FFI (Costa and McCrae, 1992). Emotional intelligence was measured by the Arabic version of Self-Report Emotional Intelligence Test (Schutte et al, 1998). Occupational stress was measured by perceived stress scale (Cohen et al, 1983), and the Brief Cope scale developed by Carver (1997) was used to assess participants' coping style. Results show that Conscientiousness, Neuroticism, Extraversion, and emotional intelligence were all significantly correlated with perceived job stress. Data from regression analysis revealed that three variables namely Neuroticism ($b=.401, p < .01$), emotional intelligence ($b=-.266, p < .01$), and Conscientiousness ($b= -.143, p < .05$) predicted perceived job stress, and together explained 33% of its variance. Regarding coping strategies, results demonstrate that the most frequently used strategies were turning to religion and instrumental social support. On the contrary, substance use was found to be the less used strategy among the sample. Moreover, conscientiousness, extraversion, and emotional intelligence show significant positive correlations

with adaptive coping strategies (e.g., planning, active coping, emotional social support) and significant negative associations with maladaptive coping strategies (e.g., self-blame, substance use, behavioral disengagement). In contrast, Neuroticism correlated negatively with adaptive coping strategies and positively with maladaptive coping strategies. The implications of these findings for practice and future research will be discussed.

Keywords: *personality, emotional intelligence, occupational stress, coping strategies*

An examination of the relationships between elements of the psychological contract (i.e., type and fulfilment), careerism and employee turnover intentions

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To date, existing research on the psychological contract has predominantly focused on contract breach rather than examining its contents. The mechanisms through which the psychological contract affects employee retention attitudes and behaviour are also not well understood. Therefore the present study aims to investigate the relationships between elements of the psychological contract (i.e., contract type and fulfilment) and an employee's intention to leave (ITL) their current organisation, and to explore the role of careerism as a mediating and moderating variable. 202 Allied Health Professionals completed a questionnaire containing measures of the psychological contract, careerism and turnover intentions. As expected, correlational analyses revealed that ITL is positively related to transactional obligations and negatively related to relational obligations and employer balanced obligations. A strong positive association between contract fulfilment and ITL was also found. As predicted, path analyses conducted via Structural Equation Modelling demonstrated that careerism partially mediates the relationship between psychological contract types and ITL. These findings suggest that employees with transactional contracts are more careerist, resulting in higher ITL, while employees with relational contracts are less

careerist, resulting in lower ITL. Contrary to expectation, Multiple Linear Regression analyses revealed that careerism failed to moderate the relationship between perceived contract fulfilment and ITL. The results were consistent with the proposition that psychological contract type and fulfilment predict employee turnover intentions. Moreover, it appears that careerism is important in shaping the contract type-ITL relationship. Organisational awareness and understanding of employee psychological contracts and career motives is needed.

Keywords: *psychological contract, contract type, fulfilment, careerism, employee turnover intentions*

An examination of the role of efficacy in intention to mitigate climate change: Self-efficacy, response efficacy, collective efficacy and collective response efficacy

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The nature of climate change (CC) dictates that it can only be solved through the collective action of millions of people. Surprisingly, few studies have examined the role of efficacy beliefs in predicting intention to act to mitigate climate change (CC intention). Drawing on Bandura's efficacy theory, this study conceptualized efficacy as consisting of four separate constructs (self-efficacy, personal response efficacy, collective efficacy, and collective response efficacy) and tested the role of efficacy beliefs (along with personal norms) in predicting CC intention. The present study used Stern's Value-Belief-Norm theory as a framework and hypothesized that beliefs (in this case efficacy beliefs) would lead to CC intention via their effect on personal norms (feelings of moral obligation to mitigate CC). Participants were 461 students at a Northwestern University in the United States. Participants completed measures of personal norms, efficacy beliefs, and a CC intention scale that tapped dimensions related to travel behaviors and household energy use. Structural regression modeling was used to evaluate the model. The final model provided an excellent fit to the data. Personal norms partially mediated the relationships between self-efficacy

and CC intention and response efficacy and CC intention, and fully mediated the relationships between collective efficacy and CC intention and collective response efficacy and CC intention. Personal norms had the largest total effect on CC intention, followed by personal response efficacy, self-efficacy, collective response efficacy, and collective efficacy (whose effect was negative). Overall, the model explained 33% of the variance in personal norms and 36% of the variance in CC intention. As hypothesized, increases in efficacy beliefs (except for collective efficacy) resulted in increased personal norms and CC intention. The results underline the importance of assessing efficacy beliefs when predicting CC-related behaviors and suggest that researchers using Stern's Value-Belief-Norm theory may benefit from incorporating efficacy beliefs in their research. This study also has implications for those who design behavior change campaigns and suggests that bolstering people's efficacy beliefs may be an effective strategy.

Keywords: *climate change, efficacy*

An individual approach to work-life balance: Support for the big 5 predicting individual work-family coping through structural equation modelling

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Balancing work and other responsibilities is a common concern among most adults, yet research has suggested this experience varies across individuals. Personality has been shown to influence different work-family outcomes; however the means by which individuals manage life roles is unclear. Preliminary research by the authors has evidenced that Big 5 personality traits (i.e., neuroticism, extroversion, openness to experience, agreeableness and conscientiousness) predict use of work-family coping strategies (e.g., active role management, partner support, tension reduction, cognitive restructuring, friend and relative support, workplace support, and reducing personal role demands). The present study aims to validate these results through Structural Equation Modelling (SEM). Of interest was whether the 5-

factor personality model would be supported through Confirmatory Factor Analysis (CFA), as previous CFA analyses have failed to support the a priori structure. A convenience sample ($N = 327$) was used to confirm the 5-factor personality (NEO-FFI) and the 7-factor coping (Individual Work-family Coping Questionnaire) models through CFA, and test the influence of the Big 5 on work-family coping through SEM. An independent sample of 725 employees from a public service agency was used to validate the structural model. CFA produced revised models of 5-factor personality and 5-factor coping (reducing personal role demands and workplace support were deleted); these comprised the structural model. However through SEM, the neuroticism and openness to experience traits did not explain the use of work-family coping strategies, therefore were eliminated. Conscientiousness predicted use of active role management. Agreeableness predicted use of tension reduction, while extroversion predicted use of partner support, cognitive restructuring, and friend and relative support. The structural model was supported in the independent sample. Results suggest that strategies to facilitate work-life balance among employees should be diverse in recognition of dispositional factors. Implications for organisations include developing a suite of strategies targeted to the individual level, and for managers to gain an understanding of individual employee preferences. Revised models based on Big 5 Personality and Individual Work-family Coping fit for SEM were produced, however, the significant reduction in items and low numbers of items measuring factors are of concern and prompt suggestions for future research.

Keywords: *work-life balance, big five model of personality, work-family coping strategies, Structural equation modeling, individual approach*

An integrated model of health services and employment placement: An empirical evaluation

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The use of an integrated model for the delivery of employment services to clients, whereby evidence based health and psychological interventions, with theoretical bases in cognitive and behavioral therapeutic and brief therapeutic traditions, are provided to overcome severe psycho-social barriers to employment, are not commonly used. This organization is one of the few commercial enterprises to develop and use such a model. It is a model favored currently by government and increasingly other practitioners are beginning to copy it. However, at present, little has been done to evaluate its efficacy. This paper presents data in support of such an evaluation. The aim is to establish the relationship between the data collected by psychological staff who assess the health and psychological condition of applicants and who employ psychological interventions to overcome barriers to successful employment and the nature and duration of the employment placement of that client by employment service officers subsequent to the interventions. The design is a large scale cross-sectional analysis of a sample of job seekers across the entire country of Australia, ensuring a representative sample of clients who have significant barriers to employment, barriers which stem from histories of mental illness, physical and sexual abuse and drug and alcohol use. Psychologists systematically gather General Health Questionnaire (GHQ-12) and Depression Anxiety and Stress Scale (DASS) data over the course of three sessions with clients. Change scores on these variables, reflecting the impact of psychological interventions in the sessions, are related to measures of the employment of the client after the release of the client to employment consultants (EC). Measures of work capacity, including full versus part time status, salary level, nature of job, nature of employer and duration of employment are collected. These data are routinely collected over several months in the organization's offices, situated in over 80 offices across Australia. Data collection, using 100 psychologists in their regular duties has commenced. The analysis of the data will comprise multivariate analysis of the relationships between the psychological test data and the employment outcome, examining the impact of prior condition and degree of change duration the psychological interventions. Sample size will enable estimation of the impact

of the interventions upon outcomes and will also enable the identification of any significant psychological barriers that continue to preclude successful employment outcome, by examination of sub-groups of clients within the sample. The evaluation of the data will demonstrate, with a large representative sample of job seekers in Australia, the efficacy of a theoretically driven integrated model in enabling successful job placement and will also enable the identification of further barriers to employment.

Keywords: *employment services, efficacy, psychological interventions, employment, job seekers*

An intergroup and intragroup approach to workplace bullying: Patterns of bullying from ingroup versus outgroup sources

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Bullying in the workplace is a prevalent and pervasive behaviour that affects health, well-being, and performance. Research has predominantly examined individual and organisational factors that promote bullying in the workplace, despite evidence that bullying is frequently an intergroup phenomenon, occurring between members of different groups or levels, and is also normative in certain professions and organisations. As such, this study introduces an innovative theoretical framework that explains workplace bullying as a function of social identity processes. To support this approach, this study examined patterns of relationships between types of bullying, sources of bullying from higher, lower or equal level employees, level of employees, and employment status (full-time/part-time). A sample of 179 nurses from a large hospital in Victoria completed a questionnaire. Patterns of relationships emerged between types and sources of bullying, which suggested that relationships between and within groups may underlie types of bullying behaviours. Specifically, it was found that derogation (e.g. criticism, threats and intimidation) is a predominantly aggressive intergroup behaviour

used by higher levels towards lower levels to maintain intergroup distinctions. Additionally, it was found that social exclusion (e.g., being ignored/left alone socially, insulted or offended) is predominantly used by bullies either as an intragroup behavior in order to ostracise deviating ingroup members and maintain ingroup member conformity and homogeneity, or as an intergroup behavior which is used by members of higher level groups toward those in lower level groups to maintain intergroup distinctions and emphasise lower group members' relative lack of power in the workplace. Work-related bullying (i.e., misuse of power) emerged as an intergroup behaviour that could either be used by higher levels to separate their group from lower level groups, or to highlight 'superior' characteristics of the ingroup. These patterns of relationships between types and sources of workplace bullying support an intergroup and intragroup approach to workplace bullying. It was concluded that, compared to individual and contextual explanations, the social identity approach to workplace bullying best explains why the type of workplace bullying appears to differ depending on whether it occurs from a higher level group, lower level group, or from a member of the same group. Further research on this approach is needed, across industries and professions, and interactions between individual, contextual, and group-related factors predicting workplace bullying should also be explored.

Keywords: *intergroup and intragroup approach, workplace bullying, social identity, bullying, aggressive behaviour*

An investigation into stress-induced analgesia and pain during self-harm

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All existing stress theories propose stressor-strain effects, but several authors suggested that reversed effects of strain on stressors might also explain their empirical relation. We propose that both effects exist, but they rest on different mechanisms that require different amounts of time. Reversed effects of strains on stressors

should involve changes in job tasks, which are frequently caused by job changes: Employees under strain either drift towards high stress jobs (drift hypothesis), or employees are attracted by low strain jobs (refuge hypothesis). Such drifts/flights take some time to happen. On the other hand, we propose effects of stressors on strain to require less time. Overall, we propose reversed effects to dominate in long term panel studies, whereas stressor-strain effects should dominate in short term panel studies. Hypotheses were tested by meta-analyses of existing panel studies ($k= 68-93$; $n= 25.985-39.882$). Population correlations for 2-Variable 2-Wave matrices were estimated using the Raju et al. (1992) validity generalization approach, and then further analyzed using structural equation modeling. Simultaneous meta-analyses of all studies did not provide evidence for causal effects in either direction. With length of time lag as a moderator, however, hypotheses were confirmed. Long-term (> 1 year) studies showed evidence for reversed causation (refuge hypothesis), whereas short-term panel studies yielded evidence for effects of stressors on strains. Despite the weak effects discovered, we conclude that stressors impact on strains. Panel studies covering much shorter time intervals are necessary to provide stronger evidence. When reversed causation hypotheses are tested, long time intervals are necessary. Finally, we conclude that results from cross-sectional studies are unlikely to yield inflated stressor-strain effects due to reversed causation. The reason is that our results support the refuge hypothesis of reversed causation, and the refuge process reduces rather than increases strain-stressor correlations.

Keywords: *stressors, job changes, job satisfaction*

An investigation of delusion-like beliefs in anorexia nervosa

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Anorexia Nervosa (AN) is a disorder characterized by irrational beliefs about body weight and shape. While these cognitive

features play a significant role in the formation and maintenance of the disorder, little is known about their phenomenological characteristics, and whether such beliefs could be characterized as delusional. The current research aims to investigate the similarities and differences between unusual and body-related beliefs in individuals with AN, beliefs of body image dissatisfaction in healthy controls, and delusional beliefs in schizophrenia. Participants completed the Brown Assessment of Beliefs Scale (BABS), and the Psychotic Symptom Rating Scale (PSYRATS-Delusions) in relation to a dominant belief regarding body weight/shape (AN sample and healthy controls) or a current delusion (schizophrenia sample). All groups completed the Peters Delusions Inventory (PDI) to assess a wide range of delusion-like beliefs. The AN sample endorsed higher levels of preoccupation and distress in relation to their dominant belief (PSYRATS), but were comparable to the schizophrenia sample on belief conviction and the degree of life disruption experienced. The BABS found the AN sample to have better insight into their belief than the schizophrenia sample. On the PDI, the AN sample endorsed a greater number of unusual beliefs than healthy controls, but fewer than the schizophrenia sample, and displayed greater distress and preoccupation for these beliefs than the other groups. The body-related beliefs of the AN sample displayed phenomenological similarities to delusions in schizophrenia. High degrees of distress and preoccupation in the AN sample were the major points of difference, which might be accounted for by better illness insight in this group.

Keywords: *anorexia nervosa, delusional beliefs, body image, schizophrenia*

An investigation of Lebanese students' reactions, cognitive processing, and quest for meaning following the 2006 war in Lebanon

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The overarching aim of this study is to account for negative and positive outcomes of traumatic events in a Lebanese student sample by

investigating: the role of distress and posttraumatic growth as co-existing mechanisms; the interplay of key variables in the model of posttraumatic growth and cognitive processing as put forward by Tedeschi and Calhoun (1995; 2004) and Janoff-Bulman (1989; 2004); the role of rumination in response to traumatic events; and the validity of posttraumatic growth reports and their potentially illusory nature. 295 students from four universities based in Lebanon participated in the study. Students completed self-report questionnaires relating to their direct and indirect exposure to the 2006 Lebanon war which lasted for 33 days. Measures consisted of self-report measures of positive and negative outcomes including posttraumatic growth, changes in outlook, and distress; cognitive processing measures including measures of intrusion, rumination, and reflection; and measures of mood and social desirability accounting for covariate variables. Good reliability results supported the use of Western-based measures in a Lebanese student sample. In relation to the first two aims, findings provided support for the co-existence of growth and distress suggesting a catalytic role of distress in initiating growth; and for the validity of the use of Tedeschi and Calhoun's growth model in a Lebanese context. A refinement of the construct of rumination, as set in the third aim, was put forward through factor analyses and the role of intentional rumination as a mediating variable was established as a determining factor in the relationship between posttraumatic growth and trauma exposure. Findings were consistent with the theoretical models by Tedeschi and Calhoun and Janoff-Bulman and supported the key role played by cognitive processing and active meaning-seeking attempts in finding potential growth following traumatic events. Additional findings contributed to data on the validity of growth as set in the fourth aim, and showed mixed findings pointing to a potentially illusory, as well as a potentially veridical, account of growth. Results suggest that while distress may still remain, active cognitive attempts to grapple with the meaning of traumatic events may lead to posttraumatic growth.

Keywords: *cognitive processing, traumatic events, distress, posttraumatic growth, Lebanese students*

An investigation of the factors predicting organizational identification in new staff

SMITH, L. (University of Queensland)

In the first few months of their employment, what makes one employee want to stay, and another to resign? Researchers have argued that once an individual is identified with a social group, and self-categorized as a group member, they will be committed to their group. This is obviously desirable within organizations. Yet, we are still unclear on the process through which individuals become identified with their new organization or work team, and which level of identification is important in predicting turnover. Guided by insights from social, organizational, cognitive and development psychology, this study investigated (a) the factors which predicted identification with both the work team and the organization, and (b) the relationship between both levels of identification and turnover intentions. 569 new staff who had been employed at a large, public-sector organization for less than 6 months completed a questionnaire about their experiences. Based on a model of identity integration (Amiot et al., 2007), the questionnaire measured social factors (e.g., social support), individual perceptions (e.g., identity conflict, procedural justice) and organizational outcomes such as turnover intentions, and subcomponents of identification at both the team and organizational level. Preliminary structural equation modeling (SEM) analyses on the subcomponents of identification revealed that group-level satisfaction negatively predicted turnover intentions at both the team and organizational level. Subsequent SEM analyses demonstrated that social support by team members and the team leader predicted greater satisfaction with both the organization and the team, but to different degrees. Perceptions of procedural justice also positively predicted organizational satisfaction, but not team satisfaction. Experience of identity conflict in new employees negatively predicted both organizational and team satisfaction and was directly positively related to turnover intentions. It is concluded that both support by colleagues, and perceptions of procedural justice at work, combined to socialize newcomers both within their work team and the organization.

Significantly, both levels of identification were independently important in predicting turnover intentions. The multi-level facilitators and inhibitors of the identification process are discussed, alongside the implications for social-psychological theory of the development of identification and its impact on workplace turnover.

Keywords: *organisational identity, group membership, staff turnover, procedural justice*

An observational survey of driver distraction in Austria

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The main aim of the present study was to identify the proportion of Austrian drivers who were engaged in secondary tasks while driving. The study also investigated the types of distracting behaviours along with demographic differences. Road side observations were used to collect the data at ten randomly selected sites in Salzburg. All ten sites were observed twice, resulting in 20 hours of data collection. In total 10,767 drivers were observed, with 91.3% of them driving only, while 8.7% were also engaged in a secondary task. The most commonly observed secondary tasks were using a handheld mobile phone and smoking. There were also demographic differences, with younger drivers being more likely to engage in a secondary task than older drivers. In addition younger drivers were more likely to use a mobile phone while driving. Drivers were also more likely to be eating and drinking while driving in the morning and on main roads (cf residential roads). Finally, drivers were also more likely to be distracted on a Monday. A relatively large proportion of the observed drivers were engaged in secondary tasks while driving, which is concerning. Furthermore, many of the results support previous research findings using different methods of data collection. This indicates that road side observation can be a useful technique for collecting data on driver distractions.

Keywords: *drivers, distracting behaviours, demographic differences, secondary task, road side observation*

Antecedents and outcomes of idiosyncratic deals: Including deals that never happened

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Idiosyncratic deals (i-deals) are personalized arrangements of a non-standard nature, negotiated between individual employees and their employer. Special arrangements are frequently sought out to customize conditions of work and employment, thus increasing fit with personal needs, preferences, and aspirations. I-deals are authorized by employer agents (e.g., managers, supervisors), possessing legitimate power to grant the resources bargained for. The present study examines differential antecedents and outcomes of two previously distinguished forms of i-deals: a) special flexibility in working times (flexibility i-deals), and b) customized professional development opportunities (development i-deals). Survey data were collected from 159 medical doctors in two German hospitals. Using a refined version of a previously validated scale, participants rated the extent to which they had successfully negotiated special conditions (i-deals). Alternatively, they could indicate that they had not tried to negotiate for the respective content (not asked for) or were turned down (denied i-deals). Antecedents refer to characteristics of the: a) individual (e.g., gender, age), b) job (e.g., interdependence, position), c) leadership situation (e.g., LMX), and d) organization (e.g., perceived transparency). Examined outcomes are a) work-family conflict, b) work engagement, and c) career satisfaction. Structural equation modeling was used to test hypotheses on the differential antecedents and outcomes of the two types of i-deals. Hierarchical position and LMX were the best predictors for both forms of i-deals. Organizational transparency limited the use of development i-deals, whereas flexibility i-deals were restricted by job interdependence. As expected, flexibility i-deals related negatively to work-family conflict, whereas development i-deals showed positive associations with both work engagement and career satisfaction, but

also appeared to increase the risk of work-family conflicts. Denied developmental opportunities related negatively to work engagement, whereas denied time arrangements aggravated work-family conflict. Results highlight the individual and organizational benefits of customized development opportunities as well as tensions regarding work-life balance. Flexibility i-deals by themselves seem neither beneficial nor detrimental for employee engagement. Findings also call attention to the potential costs of the "deals that did not happen". We conclude that the negative side-effects of discouraging or denying desired i-deals may be substantial and have not received sufficient attention.

Keywords: *idiosyncratic deals, flexibility, professional development, career satisfaction, work-family conflict*

Antecedents, correlates and consequences of entrepreneurs' risk taking

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The present study is the fourth in a series of studies on the risk taking propensity of entrepreneurs, a topic that generated great controversy in the literature. It aimed to test three hypotheses. Firstly, entrepreneurs' risk taking is correlated with psychological antecedents including: entrepreneurial traits (e.g. love of challenge) but not managerial traits (e.g. love of management); regulatory focus of promotion but not of prevention; secure attachment but not insecure attachment (avoidant and anxious ambivalent); openness to experiences, Inventor Type (perceiving and intuition) and Investigative vocational type. Secondly, entrepreneurs' risk taking is correlated with the risk related aspects of the new venture: Novelty and Technological uncertainty. Thirdly, entrepreneurs' risk taking is correlated with certain dimensions of ventures' success: including meeting business goals and creating new technological and market opportunities. 88 Israeli entrepreneurs and 77 new ventures participated in the study. All ventures were in their early stages and mainly High Tech. The

ventures were chosen randomly by students who were collecting data for their final project in college and as such can be seen as representative. A self report questionnaire that included three parts: (a) provided information about the new venture, including the novelty and technological uncertainty; (b) assessed seven features of the entrepreneurs' personality and (c) assessed the ventures' success. The results provided strong support for all three hypotheses. The findings indicate that risk-taking is a major entrepreneurial characteristic that differentiates entrepreneurs from managers. They findings contradict studies that argue that entrepreneurs are risk avoidant or that risk-taking propensity is not be one of their distinguishing traits.

Keywords: *entrepreneurship, risk taking, antecedents*

Anticipatory cognitions and innovation performance: The value of contextual fit

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An improved understanding of the mental processes from which innovation emerges may help individuals to successfully innovate (Bledow, Frese, Anderson, Erez, & Farr, 2009). Towards this goal, the present study focuses on two forms of task-related cognitions which we hypothesize play a key role for innovation performance: anticipation of success and anticipation of barriers. Task-related anticipatory cognitions imply an intense mental engagement with one's work task. Based on self-regulation theories, we argue that both anticipation of success and anticipation of barriers have important and distinct functions for motivation and performance (Higgins, 1997; Kuhl, 2000; Oettingen, Mayer, Thorpe, Janetzke, & Lorenz, 2005). The relative importance of these two forms of cognitions depends on the work context. If there is contextual fit between cognitions and the demands of the work context, we expect that performance is highest (e.g., Higgins, 2005). If personal initiative is demanded by the work context, anticipation of success is related to performance, whereas

anticipation of barriers is related to performance if the work context demands close adherence to rules and guidelines. Hypotheses were tested with a sample of 110 employees of 48 R&D project teams. Team members provided self-ratings on success and barrier anticipations and evaluated the demands of the work context. Project leaders assessed performance of each team member. Due to the nested nature of the data, hierarchical linear modelling was used to test hypotheses. In line with the hypotheses, barrier anticipations ($\gamma_{10} = 0.17, p < .05$) and success anticipations ($\gamma_{10} = 0.11, p < .10$) were positively related to performance. Furthermore, barrier and success anticipations interacted with the demands of the work context supporting the contextual fit hypothesis. The study provides support for propositions derived from self-regulation theories: anticipation of success and anticipation of barriers have important and distinct self-regulatory functions. Moreover, their relative importance depends on the demands of the work context. Due to the cross-sectional design and the partly marginally significant findings unequivocal practical implications on stimulating success or barrier anticipations require further research. Finding the right balance between success and barrier cognitions for a given context appears to be of primary importance. We argue that this line of research has the potential to be of significant applied value because success and barrier anticipations can be influenced by self-regulation and leadership to promote success at innovating.

Keywords: *innovation, anticipatory cognitions, success, barriers, contextual fit*

Applicability of learner driver research to learner motorcyclists

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Learner driver research has identified a large range of psychological factors which contribute to the over-involvement of novice drivers in crashes. These include a range of factors related to the youthfulness of learner drivers (e.g. susceptibility to peer influences, higher propensity for risk taking) as well as factors related to inexperience (e.g. restricted ability to

divide attention between different tasks, poorer hazard perception). These research findings have informed changes in the graduated driver licensing systems in many countries which have often been paralleled in changes to motorcycle licensing. This paper compares the characteristics of learner drivers and motorcyclists and examines the applicability of the findings of learner driver research to learner motorcyclists in order to provide guidance for improving learner motorcyclist safety. The review of the international literature examined academic journal publications, industry specific training documentation, government and non government documentation relevant to motorcycle licensing. Crash data analyses were also examined. A number of differences were identified. Learner motorcyclists are not protected from the risks of the on-road environment to the same extent as learner car drivers. They are far less likely to receive immediate feedback and instruction from a supervising rider in order to avoid risky situations or address technical deficiencies (e.g. braking). Such differences in supervision between car drivers and motorcyclists are reflected in crash statistics during the learner phase, where learner drivers are relatively safe, but learner motorcyclists are not. Many of the factors associated with youthfulness are less relevant because most learner motorcyclists in developed countries are aged over 25. Despite the differences, many factors related to inexperience are common to learner car drivers and motorcyclists. The potential for training to contribute to overconfidence, optimism bias and the problem of risk taking are all relevant for learner motorcyclists. The lack of robust evaluations of measures to improve the safety of learner motorcyclists prevents firm conclusions being drawn, but the differences in the nature of motorcycling and in those attracted to it, compared to car driving, need to be considered in developing measures to improve the safety of learner (and all) motorcyclists.

Keywords: *learner drivers, motorcycle, safety, risk taking*

Applying self-determination theory to the development of burnout in humanitarian health workers

TASSELL, N. (Massey University)

The aim of the present study was to examine the effects of motivation on the development of burnout or experience of vitality in humanitarian health workers. It was expected that the Self Determination Theory (SDT) motivations of introjection and identification would have differential effects on burnout or vitality. Introjected motivation would be positively related to burnout and negatively related to vitality, while identified motivation would be positively related to vitality and negatively related to burnout. The passion for activities construct was hypothesized as mediating the role in these relationships. An online quantitative questionnaire assessed motivation and the experience of burnout and vitality in a sample of 82 humanitarian health workers, of different nationalities, working for different humanitarian organizations. The sample derived from individuals working in different humanitarian situations around the world. Path analyses revealed neither introjected nor identified motivation were significantly related to vitality, but both had direct effects on burnout, albeit in the opposite direction to that hypothesized and observed in previous SDT research. Additional path analyses showed the passion for activities construct played a mediational role between motivation and the three aspects of burnout. Obsessive passion mediated the path between identified motivation and emotional exhaustion and depersonalisation. Harmonious passion mediated the path between identified motivation and diminished personal accomplishment and depersonalisation. Results imply motivation is related to the development of burnout in humanitarian health workers. The mediational role of the passion for activities construct determines which aspect of burnout is more prevalent with regard to a specific motivation type. The findings are applicable to humanitarian organizations seeking ways to enhance employee motivation, and design and implement burnout prevention programs.

Keywords: *burnout, humanitarian health workers, self determination theory*

Applying social cognitive understanding to peer relations in school: Issues for children with deafness, autism and typical development

PETERSON, C., PETERSON, C. (University of Queensland)

An important problem for applied developmental, educational and counseling psychologists concerns children's popularity, friendships and peer relations in school and how problems in these areas can be overcome. Theory and past research suggest that peer problems are sometimes related to delayed social-cognitive development of a "theory of mind" (ToM: awareness that beliefs, both true and false, shape people's behavior). Children with deafness or autism are often unusually slow to develop ToM. This study aims to see how such cognitive delays may relate to their friendships, peer popularity and social skill in school. 80 children aged 6 to 12 years (20 each with deafness, autism, Asperger syndrome (AS) and typical development) took part. Batteries of standard ToM tests other measures of social cognition were individually administered and teachers rated children's peer popularity, social behaviour, social maturity and group relations skill using well-validated published instruments. The typically developing primary-school children outperformed their age-peers with deafness and autism on the social-cognitive ToM tests as well as on most of the behavioural social measures. Furthermore deaf children outperformed those with autism on most social maturity and social skills measures, despite scoring equally on ToM. Conversely, those with AS scored as highly as typical developers on ToM but as poorly as those with autism in popularity and social skills. ToM scores were not closely related to social skills measures in this sample, in contrast to some previous research. As well as raising interesting theoretical questions about the developmental underpinnings of peer social relations and cognitive awareness of others' minds in the context of atypical development, these findings also raise important applied questions about how to intervene therapeutically to boost children's everyday peer communication and social interaction skills. Explanations for the relative independence of social relations versus cognitive understanding of ToM for children with

autism and AS will be considered and implications of the findings for applied intervention to assist children with delayed ToM development will be discussed.

Keywords: *children, deafness, autism, theory of mind*

Are employability dimensions related to the quality of university graduates' job insertion?

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Employability has been one of the main goals to be achieved with the creation of the European Higher Education Area (EHEA) from the very start. The underlying assumption is that employability enhances the quality of university graduates' job insertion. However, this assumption still has to be tested. Therefore, the aim of this study was to ascertain whether employability dimensions were related to a number of indicators of the quality of university graduates' job insertion. Employability was conceptualized according to the psychosocial model proposed by Fugate, Kinicki and Ashforth (2004), which comprises three different dimensions: human and social capital, career identity and personal adaptability. The quality of job insertion was measured by means of the following criteria: job qualification fit, job-university degree relatedness, occupational status, pay and general job satisfaction. The study's general hypothesis was that employability dimensions are positively related to the quality of job insertion because they enable people to find better jobs. The study sample was composed of 6640 Spanish young graduates from different fields of study. Hierarchical multiple regression analysis was used to investigate the hypothesized relationships. After controlling for some demographic variables (gender, social class and years after graduation), results confirmed the positive relationship between employability and the quality of university graduates' job insertion. However, differential results were found depending on the job quality indicator. The three employability dimensions were

significantly related to job qualification fit, job-degree relatedness and occupational status. Only human capital and personal adaptability (generalized self-efficacy) were related to pay and job satisfaction. Taken into account these results, employability seems to be a multidimensional construct and a new key predictor of the quality of university graduates job insertion. Therefore, results have theoretical and practical implications in the context of the new labour relationships.

Keywords: *employability, university graduates, job insertion, job satisfaction*

Are the determinants of the maintenance of hard-to-change behaviours fundamentally different to those that determine trying: Findings from smoking cessation

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Quitting smoking is a difficult task. The vast majority of cessation attempts end in failure, even when accompanied by the best available help. This paper reviews evidence that the factors that predict the making of quit attempts are quite different to those that predict the success of attempts, once initiated. The evidence reviewed includes currently unpublished data on wave-to-wave prediction of quitting attempts and success from the International Tobacco Control (ITC) surveys that follow cohorts of smokers in a range of different countries. Motivational variables, such as outcome expectancies and explicit reports of how much they want to, strongly predict making attempts. However, when assessed at pre-quitting, these variables are typically not predictive at all and, at times, can be negative predictors of success in countries with long histories of anti-smoking activity. This does not seem to apply in countries that have only recently discouraged smoking, suggesting a hard-core of smokers who have little or no volitional control over success, beyond trying. An attempt is made to develop a new theoretical framework based on the differing roles of expectancies and experiences in the determination of various phases of behaviour change. It is argued that such models are required for understanding the maintenance

of behaviour changes that people find difficult to maintain and thus that these models may be useful in areas beyond changing addictive habits.

Keywords: *smoking, cessation attempts, success, Motivational variables, behaviour change*

Assessee profiles, assessors' judgment policy and construct validity in assessment centers

LI, D. (Zhejiang College of Administration)

The present study aimed to integrate the two aforementioned research streams by imposing structure on simulation tasks and experimentally manipulating both dimension ratings and assessee-related factors to more completely understand the design and validity of assessment centers. The second primary purpose was to focus on the way in which assessors use available information to form judgments of candidates. Risky-choice and time-pressure task designs were used. Fifty assessors evaluated 10 hypothetical candidates for a high level managerial position in a software company whose dimensional ratings were experimentally manipulated. We analyzed our data by performing multivariate generalizability analyses. Multivariate generalizability analyses indicated that construct validity evidence was established for only some assessee profiles. The results also showed that each of assessee profiles by task situations, assessee profiles by dimensions, and assessee profiles by assessors' interaction effects contributes large proportion of variance in assessment ratings. The results revealed substantial relationship between dimensions and task situations in assessors' ratings. A dimension's salience may vary as a function of a particular assessee's profile because certain actions or features of an assessee often stood out thereby affecting inferences. Assessors probably tended to notice that some pairs of dimensions were highly related in a particular situation but that other pairs of dimensions were not. The practical implications and future directions for research were also discussed.

Keywords: *assessment centers, validity, judgement, assessee profiles*

Assessing a measure of driving anxiety

SULLMAN, M. (University of Hertfordshire),
TAYLOR, J. (Massey University)

The present study investigated the psychometric properties of the Driving and Riding Avoidance Scale (DRAS) to investigate its applicability to samples other than crash survivors. The participants were undergraduate university students completed the DRAS, along with a number of demographic and descriptive questions (e.g. age, gender, accidents), in class. All participants were drivers and had a current licence. Two months later the same group of participants were again asked to complete the DRAS. Of the 301 participants who completed the first questionnaire, 219 also completed the DRAS a second time. Internal consistency for the DRAS was 0.89 and temporal stability over the two month period was 0.71. In addition, the factor structure of the DRAS supported the use of some subscales but not others in this nonclinical sample. Furthermore, while some narratives provide by participants indicated that their driving avoidance was related to driving anxiety, others gave more practical reasons for avoiding driving. Therefore, although the DRAS had strong internal consistency and temporal stability there are substantial questions regarding what the scale is actually measuring. In addition to avoidance which is due to driving anxiety, some items may be rated highly for practical reasons, such as the increasing cost of fuel. Suggestions for improving the scale are also discussed.

Keywords: *psychometric properties, Driving and Riding Avoidance Scale, internal consistency, temporal stability, driving avoidance*

Assessing positive irrational beliefs

COLLARD, J. (Deakin University)

The aim of the current study was to create a measure for directly assessing different types of positive irrational beliefs in an attempt to overcome the theoretical shortcomings of previously used inferential assessments of such beliefs. In line with Taylor and Brown's (1988) theoretical division of positive illusions into

three distinct areas, a list of questions to directly assess such beliefs was developed. In two separate studies, these items were utilised and factor analyses were conducted to determine whether they represented separate constructs. Furthermore, in the second study, a set of indirect items representing those used in the literature was also created. The responses to both the direct and indirect assessment of positive irrational beliefs were then compared. It was found in both studies that the items directly assessing positive irrational beliefs could be divided into four separate types. The grouping of such results across both studies was largely identical. The four types of beliefs were categorized as self enhancing beliefs, beliefs rejecting imperfection about oneself, irrational beliefs of control and irrationally optimistic beliefs. Together, these beliefs contributed to a super-ordinate factor. In the second study, the items indirectly assessing such positive irrational beliefs were found to relate to a single construct, however, and the relationship between the two sets of items was weak-moderate. It is concluded that future research can be enhanced by distinguishing between different forms of positive irrational beliefs. Adding to this, it appears that direct assessments of positive irrational beliefs may have a greater utility for identifying the presence of such beliefs than indirect or inferential assessments.

Keywords: *positive irrational beliefs, assessment*

Assessing school readiness using multi mode assessment system

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Children readiness to start formal schooling has been a primary concern for parents and educators as well as researchers and policy makers. Given the multidimensionality of the construct, the use of a multi mode standardized measure is warranted. This paper reports the results of a two-stage study to design and develop a standardized assessment to assess children's school readiness. In the first stage of the study, a survey questionnaire derived from

the five domain of school readiness identified by the National Educational Goal Panel (NEGP) was developed and distributed to 63 experienced elementary school teachers in Bandung to inquire the typicality of each of the indicators. The teachers came from 46 public and private schools randomly sampled from all elementary schools in the city of Bandung. Based on the results of this first stage of the study, in the second stage of the study a multi mode paper and pencil based assessment consisting of 15 different instruments grouped into three assessment formats: tests, observational checklist for teachers, and a standardized playing activity were developed. The system was field tested to 63 pupils attending 4 kindergarten in Bandung sampled using a multi stage random sampling procedure. Item and Test analyses were performed using the perspective of Classical Test Theory. After analysis and revision, the system was used to assess school readiness of 69 children attending kindergarten in the city of Bandung. Out of the 141 indicators of school readiness, 105 indicators were retained to be used in the second stage of the study. The results confirmed the 5 domain of school readiness: health and physical development, social and emotional development, approaches to learning, language development and communication, and cognition and general knowledge. Overall, the system has an acceptable reliability ($\text{Alpha} = 0.79$). The observation checklist has the highest internal consistency ($\text{Alpha} = 0.82$). The results of the assessment correlate highly with the observation of the teachers. The School Readiness Assessment System has acceptable psychometric properties. The concurrent validity evidence was also encouraging for the use of the system to assess school readiness.

Keywords: school readiness, multidimensionality, multi mode assessment system, standardized assessment, children

Assessing stigma among psychiatric patients in Singapore – Psychometric evaluation of King's Stigma Scale

YUEN, W. (National University of Singapore), SO-KUM TANG, C. (National University of Singapore), CHUN, R. (National University of Singapore)

Previous research has documented individuals with mental illness internalized the negative attitudes held by the public, which may have detrimental effects on their psychological well-being and social life. This study aimed to assess the psychometric properties of the Stigma Scale developed by King et al. (2007) in order to understand stigma in Chinese communities in Singapore. It also investigated whether the stigma level varied among individuals with bipolar disorder, major depressive disorder (MDD) and schizophrenia. 110 service users of a hospital in Singapore with bipolar disorder, major depressive disorder or schizophrenia were recruited. An exploratory factor analysis was conducted with the King's Stigma Scale to understand its factor structure. Concurrent validity of the scale was examined by its correlations with scores of the Rosenberg Self-esteem Scale and General Health Questionnaire (GHQ-12). Reliability was assessed using Cronbach's α and a subgroup of participants completed the questionnaire twice, two weeks apart. ANOVAs were conducted to compare the overall stigma level among the three groups of psychiatric patients. Principal component factor analysis yielded three dimensions (discrimination, disclosure, positive aspect) of King's Stigma Scale, with factor loadings ranging from 0.30–0.81. The Stigma Scale scores were negatively correlated with the Self-esteem Scale (Pearson's $r = -0.45$, $p < 0.01$) and positively correlated with GHQ-12 (Pearson's $r = 0.59$, $p < 0.01$). The overall reliability Cronbach's α was 0.84 (subscales ranged from 0.54–0.79) and the Pearson's correlation for test-retest reliability was 0.696 ($p < 0.01$). ANOVA showed that the scores on overall stigma scale ($F_{2,109} = 6.29$, $p < 0.05$), disclosure subscale ($F_{2,109} = 6.40$, $p < 0.05$) and positive aspect subscale ($F_{2,109} = 6.83$, $p < 0.05$) were significantly different among mental illness labels. Post-hoc Tukey test found that individuals with MDD and schizophrenia scored significantly higher on the disclosure subscale than bipolar disorder group. Individuals with MDD also scored higher on positive aspect subscale than individuals with bipolar disorder and schizophrenia. This study provided preliminary empirical evidence supporting validity and reliability of King's stigma scale to understand the stigma level among individuals with bipolar disorder, MDD and

schizophrenia. The stigma level was found to be different among mental illness labels.

Keywords: *stigma, Singapore, psychiatric patients, stigma*

Asylum seeking in Australia: The mental health consequences and their determinants

HOCKING, D. (Victoria University), KENNEDY, G. (Victoria University), SUNDRAM, S. (Mental Health Research Institute of Victoria)

Asylum seekers (AS) frequently undergo a protracted refugee determination process in Australia, which may compound trauma experienced in their country of origin and/or during transition to Australia. It is well established (Silove, 2002) that refugees experience higher rates of post-traumatic, depressive and anxiety symptoms and this may also apply to AS (Silove, 1993). It is unknown if a protracted process of refugee determination contributes to this psychological and psychiatric morbidity. ASs were recruited through case-workers at the Asylum Seekers Resource Centre. Demographic information was gathered and 4 questionnaires were administered: the Harvard Trauma Questionnaire-R, the Hopkins Symptom Checklist-25, the PERI-D and the Post-Migration Difficulties Checklist. 74 ASs (63 males) from Afghanistan ($n=4$), Iraq ($n=3$), Pakistan ($n=19$), Sri Lanka ($n=39$) and Zimbabwe ($n=9$) were recruited. 31% ($n=22$) had been granted permanent protection (PR) whilst the remainder (non-PR) awaited the outcome of their application ($n=52$). The two largest sub-groups of the non-PR group were those on Bridging Visa (BV) E (33.8%) and BVA (18.3%). Sri Lankans (62.6 ± 67.1) spent a significantly longer time awaiting refugee determination than those from Pakistan (17.7 ± 39.4) and Zimbabwe (10.2 ± 2.6). Compared with the PR group, the non-PR group had significantly higher scores on all clinical scales: depression (28.0 ± 9.8 vs. 39.4 ± 10.9), anxiety (17.1 ± 7.11 vs. 21.2 ± 8.6) and trauma (79.2 ± 25.8 vs. 102.2 ± 28.2). Post-Migration living difficulties scores were also greater for the non-PR group, as were demoralisation scores (which did not reach significance). Linear regression with demoralization as DV and

demographic and other symptoms as factors, demonstrated that 60% of variance was accounted for by anxiety, depression, trauma and number of times the individual had been to the Refugee Review Tribunal (RRT). People seeking asylum in Australia have high levels of anxiety, trauma and depressive symptoms. Those who have not been granted permanent protection have significantly higher levels than those who have; this was not significantly influenced by the type of temporary visa. Demoralisation was significantly influenced by the number of times the person had presented to the RRT, indicating that the asylum seeking process in Australia contributes significantly to the mental health of AS.

Keywords: *asylum seekers, trauma, Australia, mental health, depression*

ATRAMIC: Lying and personality

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ATRAMIC (compiled by Armas-Vargas, 2007) is a multifactorial test of personality measures designed to assess self-deception and verbal behaviour which affirms or acknowledges, knowingly and intentionally lying to others. ATRAMIC tries to describe and explain what relationship exists between the reported behaviour of lying, to what extent it is recognised and affirmed. It aims to study the relationship that such conduct has with other attitudinal and personality measures such as: guilt, self-criticism, insecurity, mistrust, hypercontrol, control, transparency, coherence, consistency, social desirability, extreme caution, selective privacy, assertiveness, fear of rejection and criticism, empathy, lack of awareness, attitudes of acceptance and rejection of self-deception and lying, failure to make adjustments for lies told, self-control when lying, honesty and admission that one has lied or deceived oneself. Thus, to study the behaviour of lying, by means of these other variables and measures, enables us to understand and approach a possible behavioural pattern of a person who lies. The sample consisted of 306 adults (193 men; 113 women) with an average age of 37. 157 single, 101 married, 48 divorced. The participants

belonged to four groups: control (78 people); clinical (48), forensic population of persons charged with domestic abuse (62) and forensic population of persons convicted of domestic abuse (118 men). Objectives were to (1) examine whether there are differences between the different groups with the 22 variables of the ATRAMIC questionnaire, and (2) identify the predictive factors of the variables of the ATRAMIC questionnaire, by conducting a discriminant analysis. In using the discriminant function, 83% of the control group and the convicted forensic population were correctly classified. The variables that showed the highest discriminant power were: honesty and admission that one had lied, selective privacy, assertiveness, guilt, self-criticism, empathy, mistrust, social desirability, control, coherence, being consistent and insecurity. 84% of the cases in the control and clinical groups were correctly classified. The variables with the highest discriminant power were: failure to make adjustments for lies told, assertiveness, self-criticism, hypercontrol and control. On the basis of the samples used in this study, the differences found are sufficient to support a model that permits differentiation using ATRAMIC instruments.

Keywords: *ATRAMIC, lying, personality measurement, behavioural patterns*

Attentional bias to gambling and smoking cues in a non-dependent and non-problem gambling population

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This study was designed to determine whether smokers who are not nicotine dependent and individuals who are non-problem gamblers would show evidence for attentional bias to smoking and gambling related stimuli. 37 volunteer participants completed a modified version of the Canadian Problem Gambling Index, the Fagerstrom Nicotine Dependence Scale, and Barratt's Impulsivity Scale. They then participated in an attentional allocation task (AAT) based upon that described by Fox et al., (2001). Target stimuli, consisting of a cross (x)

and a plus sign (+) were identified 250ms following the presentation of a pictorial cue either on the same side of the computer screen as the target (validly cued trials, 80% of trials), or on the other side of the screen (invalidly cued trials, 20% of trials). The pictorial cues were either neutral, gambling related or smoking related. As reported by Fox et al. (2001) in their study of social anxiety, gambling and smoking related cues resulted in slower target identification on invalidly cued trials (so-called "attentional hold"), but had no effect on validly cued trials ("attentional capture"). However, the relationship between participants' smoking and gambling behavior was not consistent with Fox et al.'s data. There were insufficient participants who smoked to make assertions regarding this factor, but non-problem gambling behavior was negatively correlated with attentional hold of gambling cues ($b=-.42$), as was impulsivity ($b=-.47$). These results suggest that participation in gambling, even at low-moderate levels, is associated with desensitization to cues associated with this behavior. Possible theoretical accounts for this loss of attentional effect include habituation, evaluative conditioning and direct compensatory conditioning of incentive motivational properties of the gambling behavior.

Keywords: *smoking, gambling, attentional bias, cues*

Attentional control of executive function in elderly working memory: An fMRI study

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Using fMRI, the effect of training on inhibitory control of attention was investigated in the elderly, with special reference to executive function of working memory. We employed 26 elderly volunteers (12 males & 14 females; age range = 64-78 years, mean = 70.1) using two kinds of working memory task, i.e., focused and non-focused reading span tests (RSTs). In RST, the elderly were requested to memorize the target words while they read a few sentences under the dual task. Focused-RST (F-RST). Target

word was the focus word of the sentence under focused RST (F-RST), while target word is the other word of the sentence under non-focused RST (NF-RST). Focused-word was defined as “the most important word to comprehend a sentence” (Osaka et al., 2007). We used an fMRI to investigate whether ACC (anterior cingulate cortex) related the inhibitory processes. We measured fMRI activations were serially measured while elderly participants performed F- and NF- RST, before and after a training period. After training, behavioral data showed that recognition accuracy increased and reaction time decreased only in NF-RST but not in F-RST. In NF-RST condition, fMRI data showed that there were significant activations in the left dorsolateral prefrontal cortex, ACC, left inferior parietal lobule (IPL) and para-hippocampal gyrus in post-training session compared with that of pre-training. However, there was no such significant activation increase in the elderly groups without training. The findings suggest that inhibitory training in the elderly leads to improve attentional control and increase the activations which underlie executive functions of working memory.

Keywords: *attentional control, executive function, working memory, elderly, inhibitory processes*

Attitudes of seatbelt non-users in the car's front-seat: An application of the theory of planned behaviour

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More than 90% of the front-seat car occupants (drivers and passengers) in Japan are reported to use seatbelts. Seatbelt offence is regarded as a minor offence and has attracted, to date, scarce attention. Is it a trivial violation, needing little extra care? This study aimed to examine psychological determinants of seatbelt use within the framework of Theory of Planned Behaviour (TPB), and to discuss its implications for interventions. We conducted a field study at a large shopping centre in the suburbs of Tokyo. Seatbelt use behaviour of all occupants seated in

incoming cars through one of the gates was unobtrusively observed ($N=3000$). Of them, adult occupants were approached by an interviewer in the parking area and invited to a questionnaire survey. Self-reports of seatbelt users ($n=211$) and non-users ($n=76$) in the front-seats were obtained, along with their observed behaviour. Two focus groups ($N=11$) were separately interviewed. Seatbelt users and non-users were homogenous as to age, gender and driving distances. Non-users were more likely to have received a ticket due to seatbelt offence, more likely to report positive attitudes towards/less subjective control over drink-driving and red-light running. Hierarchical regression analysis showed that intention to use seatbelt was predicted by attitudes (explaining 41% of the variability in intention), and to a lesser degree, by behavioural control (10%), subjective norm (5%) and habit (2%). Perceived effectiveness of seatbelt, risk of contact with the police and discomfort were not significant predictors. Self-reported behaviour and intention were considerably correlated, but a significant gap was found between observed and reported behaviour. Discriminant analysis showed that TPB constructs moderately discriminated the observed use/non-use ($R^2=.25$, correctly classified: 69% of non-users and 81% of users). Results of focus groups indicated that non-users had unrealistic illusion of control and negative attitudes towards seatbelt use, but this could be remediable. Some seatbelt non-users can be characterized as deliberate, consistent offenders, unconvinced of the efficacy of seatbelt use. This suggests a need for targeted remedial intervention. Self-reported behaviour and intention were well explained by TPB constructs. However, further research is needed to explain the gap between observed and reported behaviour.

Keywords: *seatbelts, psychological determinants, theory of planned behaviour, attitudes*

Attitudes toward information technology careers: Competing theories for understanding gender issues

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Since women are underrepresented in information technology (IT) and other high tech fields, there is considerable interest in understanding the factors that influence commitment in this field, especially among women. Two competing theories shed light on this issue. Inclusion theory is directed toward ensuring that all employees feel a sense of belonging, participation, and influence in the workplace and describes a common set of characteristics and processes for developing inclusion. In contrast, gender theory argues that women have unique experiences in male-dominated environments and that factors contributing to women's career and organizational commitment may differ from those predictors for men. Applying these theories, the goals of this research were to: 1) examine the predictors of organizational commitment, turnover intentions, and career commitment among information technology professionals, and 2) to examine any differences in the relative strength of these predictors for women and men. Web-based survey data were obtained from 1,229 information technology workers (38% women) who responded to established measures of the three outcomes as well as a set of theoretically determined predictors, which included job stress, satisfaction with pay, growth opportunities, job security, and work-family culture. Relative weights analysis was used to examine the research questions. The results for predicting organizational commitment and turnover intentions followed the same pattern: the importance of work-family culture, job stress, and pay satisfaction in predicting both organizational commitment and turnover intentions did not differ between women and men. However, growth satisfaction was relatively more important for women and satisfaction with job security was more important to men. The relative weights analysis for career commitment showed that work-family culture, growth satisfaction, and pay satisfaction predicted a larger proportion of variance for women than for men. However, compared to women, job stress was relatively more important in predicting career commitment for men. Our results demonstrate the relevance of both inclusion theory and gender theory for understanding career outcomes. The inclusion model was supported in predicting

organizational outcomes (i.e., organizational commitment and turnover intent). Yet, our analysis predicting career commitment favored the gender-specific model. Implications for organizations and the IT workforce will be discussed.

Keywords: *Inclusion theory, information technology, gender theory, job stress, work-family culture*

Attitudes toward organizational change, change perception and the impacts of organizational changes in the social networks of a public agency

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The present study's objective is to verify the impacts of organizational changes in the intra-organizational social networks of a public agency and to relate the changes in the organizational social networks with the change perception and the attitudes toward organizational changes during a change program implementation. In order to attain this objective, a mapping of the friendship and communication networks of the agency was conducted, through the application of a questionnaire to the 194 employees at two distinct moments: during the implementation of the change, and 11 months after the first application, when the change was already settled. The change perception scale and the attitudes toward organizational change scale were also applied. The instrument of social network was composed of four parts with some information about the research and open questions that asked the subject about people of his/her friendship and communication networks. The answers were inserted in matrices and analyzed with the software Ucinet. The results allowed the analysis of the microstructures to graphically represent the two types of investigated networks. The data reveal a positive impact in the friendship network: even with a reduction of the network it became denser and the average distance between actors was reduced. The change has caused little impact on the communication network. The employees have showed opposition attitudes toward organizational changes and they have perceived

few changes in the organization. The organizational unit has predicted the attitudes toward organizational and the attitudes toward change have predicted the social network cohesion and the centrality of social network actors. These results are contrary to previous literature which affirms that in change processes, the intra-organizational network of communication shows greater differences, as it is essential for the functioning of the organization, and is transformed to better adapt to the new organizational reality.

Keywords: *organisational change, attitudes, change perception, social networks*

Australian baby boom career women: A conceptual model of psychosocial wellbeing

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Worldwide attention is focused on the massive baby boom cohort as they transition into their retirement years. With the dramatic demographic shift of women into career roles, baby boom career women (women born 1946 to 1964) are the first cohort of career women to approach retirement age. Traditional male models of life satisfaction in retirement are insufficient to encompass the needs and expectations of women. Therefore, it is crucial to develop a conceptual model of psychosocial wellbeing for Australian baby boom career women. This model will inform policy so that strategies can be developed; thereby ensuring that these women continue to contribute to society and have fulfilling and productive lives in their later years. An extensive national survey was undertaken with 1,051 respondents. The survey was comprised of three well-established wellbeing scales: Ryff's Psychological Wellbeing scale; Keyes' Social Wellbeing scale; and the International Wellbeing Group's Personal Wellbeing Index. The survey also included the Life Orientation Test – Revised, a measure of optimism/pessimism, as well as six questions derived from content analyses of focus group interviews. Confirmatory Factor Analyses were utilized to validate the three wellbeing scales

and, where appropriate, their sub-scales. None of these provided a good fit for this sample; however, aspects of all three measures did fit. Structural Equation Modelling was then employed to fit a hypothetical structural model through path analysis with latent variables, providing tests of goodness-of-fit for the theoretical model. The effect of optimism/pessimism, as a mediating variable of subjective wellbeing, was also explored in the structural model. Additionally, there was compelling evidence that the Australian baby boom career women cohort consists of at least two distinct groups; early and late baby boomers, suggesting a dynamic model is required. This research elucidates the factors that Australian baby boom career women identified to be essential for psychosocial wellbeing in their retirement years. The preliminary conceptual model will be refined and validated in the next stage of this project. Upon validation, this model is expected to contribute to the development of effective social strategies to improve the capacities, productivity and independence of these women in their later years.

Keywords: *baby boom, career women, psychosocial well-being, retirement, life satisfaction*

Authentic leadership and self-awareness: A developmental intervention experiment

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The field of leadership development is undergoing rapid growth. More leadership development programs are being offered by universities at all levels, and more degrees are being designed that specialize in leadership (Doh, 2003). Yet, at the same time, leadership scholars point out the atheoretical nature of leadership development practices used today (Avolio, in press; Day, Harrison, & Halpin, 2009). Day et al. (2009) suggest that without theory, we cannot make scientifically grounded decisions as to how to develop leaders and leadership and how to advance research in a systematic way (p. xii). One emerging theory in this area is called authentic leadership development, and it has its

theoretical basis in self-determination theory (Deci & Ryan, 1985). Presented as a self-based model of leader and follower development, Gardner et al. (2005) proposed that self-awareness of one's values, strengths, and purpose serve as central basis for internalized self-regulation and authenticity. A study was designed to translate the theory of authentic leadership to an online leader development program and test its effectiveness. In this field experiment, two leadership interventions were compared in effectiveness for developing authentic leadership and related emerging theory of leader self-awareness. One intervention was designed to focus on all components of authentic leadership, whereas the second intervention was focused only on leader self-awareness. A total of 86 managers were randomly assigned and completed pre and post survey assessments. Other factors related to leader development including developmental readiness and leader identification were also quantitatively measured. Results show that the both interventions successfully raised participants' self-reflection, leader self-awareness, and self-rated authentic leadership, but did not raise external ratings of authentic leadership. The effect size varied based on developmental readiness levels. Qualitative data provided insight into what aspects of the intervention were most effective. Implications for future research and practice are considered.

Keywords: *authentic leadership development, self-awareness, interventions, self determination theory, self-regulation*

Automaticity and sport performance: Emotion, attentional focus and automatic skill execution

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This study used the framework of explicit monitoring theory to examine the effect of emotions and attentional focus instructions on golf putting performance. In doing so, the benefits of an emotional control versus an attentional control strategy for performance were compared while athletes were experiencing negative and positive emotions. A 2

(group: high skilled, low skilled) x 3 (emotion: negative, neutral, positive) x 3 (instructions: no instructions control, emotion focus instructions, analogy focus instructions) mixed group design was used. Emotion was a repeated measures factor with all participants performing the task under negative, neutral and positive emotion conditions. Instruction was a between group factor where participants were randomly assigned to one of the three instruction conditions. A median split was also performed on handicap to categorize athletes as high skilled (≤ 10) or low skilled (≤ 11). As hypothesized, all athletes putted more accurately when experiencing positive than negative emotion. In relation to putting consistency, low skill athletes putted more consistently in the positive than the negative and neutral conditions while high skill athletes did not differ in putting consistency between conditions. Emotion focus instructions had a small but non-significant impact on increasing the beneficial effect of positive emotions and the detrimental effect of negative emotions on performance. This was mirrored in episodic memory protocols for movement mechanics, where athletes reported fewer execution steps on average in the positive than the negative and neutral conditions. Contrary to expectations, analogy instructions did not improve performance over the no-instructions control condition. The results provided strong support for explicit monitoring theory through demonstrating the benefit of positive emotions for performance. Overall, the findings suggest that controlling emotions, and attentional focus toward emotions, during competition may be a more effective strategy to encourage automaticity and improve performance than using analogy or metaphoric instructions.

Keywords: *emotions, attentional focus, sport, automaticity, episodic memory*

Awareness and perceptions of the health risks of exposure to radon in homes

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The project aims to link people's attitudes and behaviors to the geography of radon occurrence

in the area, the history of radon testing initiatives, as well as the socio-economic context. More specifically, the project will examine whether: (1) people's awareness and perception of the risks of radon vary according to exposure; (2) Recent radon awareness and testing initiatives, such as the radon roll-out program, have had an effect on people's radon-related perceptions and testing behavior; and (3) The effectiveness of radon policy and communication initiatives is mediated by social factors, such as social capital and trust. A representative sample of 1,578 residents aged 16 and older living in radon-affected areas of 15 local authorities in England and Wales. The interviews were conducted in 214 sampling points that were randomly selected from a total of 428 output areas that were identified as being affected by radon. As a multistage sampling technique was used, the data was analyzed from a multilevel perspective using the MLwiN software package. This study found that awareness of radon is high in radon-affected areas in England and Wales, but that people are generally not aware of the potential adverse health effects. Participants living in local authorities that had participated in the radon roll-out program had higher levels of awareness, felt better informed, and were more likely to have tested their home for radon than participants living in non-participating local authorities. Similar results were found for participants living in 'actionable' areas as compared to those living in 'non-actionable' areas. The study further found that where awareness of radon was high in Southwest England, it was lower in the rest of England, and in particular in Wales. This study suggests that the radon roll-out program has been effective in raising awareness of radon, and that residents of participating local authorities have formed a better idea whether they are personally affected by radon or not. A similar pattern was found for people living in actionable and non-actionable radon-affected areas, probably also partly reflecting the impact of the program and other previous radon awareness campaigns. The results also show that in particular in Wales there is scope for further radon awareness and testing campaigns.

Keywords: *radon exposure, awareness, health risks*

Beating the blues after cancer: A randomised controlled trial of a tele-based psychological intervention for high distress patients and carers

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The diagnosis and treatment of cancer is a major life stress such that approximately 35% of patients experience ongoing clinically significant distress (Zabora et al., 2001). Distress amongst carers is often greater than that amongst patients (Cliff & MacDonagh, 2000). Psychological disorders such as anxiety disorders, depression, post-traumatic stress disorder and sexual disorders are prevalent among those coping with cancer, and yet access to evidence-based psychosocial care is the exception rather than the norm in many settings (Chambers et al., 2009). Access to psychosocial support is largely limited to patients at the time of diagnosis or hospitalisation, and is often limited to those living in major metropolitan centres. To this end, a cancer counselling service was established by a peak state-based non-government cancer control organization in 2004 to provide high-quality, evidence-based psychological support for all people in Queensland affected by cancer. In 2009, a two arm randomised controlled trial, Beating the Blues After Cancer, was initiated to investigate the benefits of this type of psychosocial intervention. The trial involves patients and support people who have elevated psychological distress as measured by the Distress Thermometer at point of contact with one of two community-based cancer help lines. The trial compares two telebased interventions including (1) minimal contact self management introduced by nurse counsellors and (2) individualised tele-based cognitive behavioural five-session intervention delivered by psychologists from the cancer counselling service. This paper will provide preliminary descriptive data on participants in the Beating the Blues After Cancer trial. The paper will also describe the psychological interventions utilized in the trial, including a number of evidence-based approaches for use with clients affected by cancer. This study will help determine the efficacy of population based strategies for

promoting optimal psychosocial adjustment and mental health for people affected by cancer who are at risk.

Keywords: *cancer, stress, counselling service, helpline*

Behavioural gerontology and clinical practice: a critical review and implications for clinicians and researchers

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To critically review recent (2005-2009) behavioural gerontology literature on managing challenging behaviours of older adults and compare published findings with reasons for referral to a clinical service. Based on this review and comparison, this paper will offer recommendations for clinicians and researchers interested in providing assistance to care staff or family carers in managing older people who exhibit challenging behaviour. Criteria for inclusion comprised research articles published in the last five years which: included older adult participants (> 64 years) provided a direct measure of a socially relevant behaviour, provided a clear description of environmental or psycho-social intervention procedures, used an experimental design (either single subject or group), and manipulated either antecedent or consequent events or conditions. Results of the review are compared and contrasted with recent (2007-2008) reasons for referral of 26 older adults to a specialist behaviour assessment and intervention clinical service. Seventeen articles from six Journals met criteria. These addressed seven problem areas including engagement (47% of articles); depression (18%); independence in ADL (12%); safety belt use (6%); sleep (6%) agitation (6%); and cognitive function (6%). The literature review results contrasted with the reasons for referral to the clinical service which included physical and verbal aggression, disruptive vocalizations, resistiveness to care, chronic psychotic behaviours; intrusiveness; and other idiosyncratic behaviours. The underlying causative factors of these behaviours include depressed mood, chronic pain, sensory

deprivation, social isolation, cognitive problems (including disorientation and communication impairments), and inadvertent reinforcement by staff. The differences between behaviours as clinical reasons for referral (as observed and described by carers) and as areas of study selected by researchers, are discussed and reconciled with reference to the causative factors. Evidence-based practice recommendations and suggestions for future research based upon the clinical reality will be discussed. Overall, clinicians and researchers need to document long term follow up in cases, researchers need to include more detail about their interventions or combination of interventions in research publications, and better objective measures of outcome are needed.

Keywords: *behavioural gerontology, challenging behaviour, caregivers, older people*

Beliefs, distorted thoughts and aggressive behaviour in men who abuse their partners

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Men who abuse their partners tend to be affected by numerous cognitive biases, related, on the one hand, with mistaken beliefs about gender roles and the inferiority of women and, on the other, with distorted ideas about the use of violence as a form of conflict resolution in the couple (Echeburúa et al., 1998). In this work, we show the results of a questionnaire containing 109 items that we selected at random to measure distorted beliefs and thoughts about women, the use of violence in the couple and the relationship that such beliefs and thoughts have with the aggressive behaviour of men who abuse their partners. The sample comprised 94 men who had abused their partners. The Beliefs and Distorted Thoughts Questionnaire (CREE, Echeburúa et al., 1998) was utilized, obtaining four factors: (1) Distorted Thoughts about Women (P.D.M.), (2) Distorted Thoughts about the Use of Violence (P.D.V.), (3) Distorted

Thoughts about Relationships. (P.D.P.), (4) Control Items. Then the Aggression Questionnaire (AQ, Buss and Perry, 1992) was used to measure four factors: Physical Aggression, Verbal Aggression, Anger and Hostility. We present the results of the factorial analysis for each factor, internal consistency (Cronbach Alpha) and the correlation between the measures of different factors of the CREE and AQ questionnaires. From the Beliefs and Distorted Thoughts Questionnaire (109 items), we obtained 2 sub-questionnaires, each with 2 factors: (A) Questionnaire A: Distorted Thoughts about Women (21%; $r = .80$), Distorted Thoughts about Violence (13%; $r = .82$); Explained Variance = 34%, and (B) Questionnaire B: Distorted Thoughts about Relationships (23%; $r = .79$); Control Items (12%; $r = .64$); Explained Variance = 35%. From the Aggression Questionnaire (AQ), we obtained two sub-questionnaires, each with two factors: (A) Physical Aggression (33%; $r = .78$) and Anger (16%; $r = .71$); Explained Variance = 49% and (B) Hostility (30%; $r = .81$) and Verbal Aggression (20%; $r = .67$); Explained Variance = 50%. From the correlation analysis we found that all the factors of the aggression questionnaire (AQ) positively and significantly correlated with all the factors in the beliefs and distorted thoughts questionnaire. For example, hostile behaviour correlated with distorted thoughts (P.D.) about women ($r = .36$; $p \leq .001$), about violence ($r = .44$; $p \leq .001$), about relationships ($r = .49$; $p \leq .001$). The data we found in this work significantly support the convergent validity for the combination of the variables of the Aggression Questionnaire (AQ) with the factors of the Beliefs and Distorted Thoughts Questionnaire (CREE).

Keywords: *abuse, cognitive bias, conflict resolution, distorted beliefs*

Best interests of the child: A national Australian survey of experts and legal professionals

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In all jurisdictions, including Australian courts, in decisions about children, the paramount consideration is the "best interests of the child".

Courts often rely on an assessment by a psychologist in making this determination. The absence of any clear definition of "best interests" or professional guidelines to inform the methodology or interpretation of findings leads to challenges for scientist-practitioners to effectively assist the court. The study examined the gaps in our knowledge of expert practices in interpreting this standard. To determine how experts and legal practitioners interpret "best interests of the child", an on-line survey was administered nationwide to psychologists and legal practitioners involved in child and family court proceedings in Australian jurisdictions. Qualitative and quantitative questions explored respondents' views regarding the best interests of children in custodial disputes and issues impacting expert assessments in that context. Participants ranked the relative importance of legislative criteria relevant to children's best interests and indicated their temporal considerations--whether decisions were made according to the child's best interests in the short- or long-term. Preliminary findings from the first Australian survey of family court psychological experts and legal practitioners highlighted differences and some similarities between psychologists and legal professionals in applying the statutory criteria. Groups of legislative factors considered most important for children of different ages were identified. Questions on information about the limitations of current expert assessment practices yielded information of interest to law reformers and policymakers. Variability observed in the meaning of "best interests of the child" and interpretive differences applied by practitioners underscored the vagueness of this concept. A greater awareness of practitioners' views and of differences between approaches of psychologists and legal practitioners can enhance cooperation between these two professions and improve the use of psychological evidence in the courts. Recommendations are made on ways to assist courts make better use of psychological expert evidence in the context of the legislative framework that guides legal judgment.

Keywords: *best interests, children, professional guidelines, legal practitioners, psychologists*

Best practices for best agers? The influence of knowledge of ageing and age climate on human resource management

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Human Resources Management (HRM) is critical for organisational performance (Combs, Yongmei, Hall, & Ketchen, 2006). In an ageing labour force (e.g., Alley & Crimmins, 2007), HR management will have to become age-differentiated. Therefore, an update of the hitherto prevailing “age-free” (Griffiths, 1999) theories underlying HRM is needed (Korff, Biemann, Voelpel, Kearney, & StamoV Roßnagel, 2009) and insights are required into the levers of age-differentiated HRM. Our study was intended to yield such insights by addressing the perceptions of HR managers. We posited that HR managers’ knowledge of objective changes in older workers’ capacities influences their choice of age-differentiated HR practices and that this influence is moderated by a company’s age climate. In a survey of 991 Heads of Personnel from German, European, and international companies from a good mix of industries, participants completed items from Palmore’s (1988; Harris & Changas, 1994) Facts on Aging Quiz to assess objective knowledge of older workers’ physical health, performance capacity, work motivation, and work-related attitudes. Participants also gauged their company’s age climate, i.e. the company-wide perception of older workers’ capacities and attitudes. Finally, participants indicated for a list of age-differentiated personnel development measures whether a given measure was used or if, and when, its future use was planned. Knowledge accuracy was positively associated with age-differentiated HRM and with age climate. Knowledge was highest in the production industries and in companies with mean worker ages above 40 years old, whilst biased images prevailed in the service industries and companies with lower mean ages. Less accurate knowledge was linked to a more pessimistic view of an age-diverse workforce’s productivity. Our findings might support the development of trainings for HR managers and supervisors. Rather than aiming at an overall “feel-good” age climate that might impede age-differentiated

HRM, such trainings would tackle specific knowledge deficits and thus contribute to age-adequate HR management (see Hedge, Borman, & Lammlein, 2006). Accurate knowledge could not only help correct inadequately pessimistic views on ageing that support negative age discrimination. Appropriate knowledge might also avoid overly optimistic views that might lead to a neglect of age-differentiated HRM and involve positive age discrimination.

Keywords: *human resources, ageing, age*

Better or worse: Mental health status and PTSD symptoms of elderly survivors after the 512 Earthquake

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Mental health state and the post traumatic stress disorder (PTSD) symptoms of elderly survivors after the Wenchuan Earthquake (May 12nd, 2008) were explored. The authors used time sequence methodology to survey 146 older adults (55+ years) lived in relocation houses in Beichuan county and 233 older adults (55+ years) in Mianyang city around where both are directly affected by the 512 Earthquake. Assessed tendency is about mental health (CMHI – E) and post-traumatic stress disorder (IES-R) symptom level with the extension of time. Older adults in Beichuan reported no decreasing tendency in PTSD symptoms and five aspects of mental health, while level of PTSD symptom of elderly in Mianyang decreased, mental health status reduced too. Positive emotion, self-evaluation, social support and interpersonal skills are less than before in Mianyang victims. Although earthquake has passed nearly one year, elderly survivors in serious disaster-hit area are in high PTSD symptom level and lower mental health states. Elderly survivors in hardly disaster-hit area had less PTSD, but their mental health state decreased with the extension time either.

Keywords: *mental health, post-traumatic stress disorder, elderly, survivors, earthquake*

Beyond the PhD: Encouraging the ongoing development of higher education researcher capabilities

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DEBOWSKI, S. (University of Western Australia)

This paper describes a development project aimed at increasing the research capabilities of university staff and testing the suitability of a collaborative learning design. A qualitative study of thirty Australian researchers (early career, mid and senior) identified a range of learning needs that required ongoing support and development as researchers progressed in their careers. Following the study, a Framework for Researcher Development was devised to map the various capabilities required to undertake effective research. Following this gap analysis, a comprehensive program of nine blended learning modules was developed piloted, trialed and implemented. The program focused on the early career phase of research work, supporting the initial induction of staff into universities and the development of more sophisticated research project management and knowledge management capabilities. Pre-test and post programme measures of research capability were collected, along with feedback on the programme delivery and content. Case studies were also undertaken in each university to review the impact of the intervention on the internal culture and practices. Over 1,000 researchers participated in the programme, with 232 participating in the pre and post-test data collection. Over 30% of the participants reported a growth in research capabilities in the areas of financial and business management skills, financial reporting compliance, quality of business management and grant productivity and efficiency. In total, 141 (60.5%) of the respondents noted that they had been able to apply the learning into their existing work roles and 196 (84.4%) noted that the learning would be of value in their future research work. Participation in the programme was rated worthwhile by 82% of the respondents. The institutions generally noted an improvement in their practices and coordination of support, although the political context was notably influential in some cases. The program illustrated the value of undertaking a detailed capability analysis and building learning support

around that research. The results highlight the difference that effective learning programmes can make to staff capabilities, and the need for careful design of the learning programme to match the learner context. The project also highlighted the challenges of working across various portfolio holders and institutions to increase the effectiveness of organisational support.

Keywords: research capabilities, university staff, collaborative learning, organisational support, management

Bias towards anxiety related words among college students as related to self-reported tobacco and alcohol consumption

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This study explores three different indexes of anxiety, from a behavioral perspective, in order to comprehend the role that different levels of anxiety, fears and worries play as precursors of tobacco and alcohol consumption among college students, given the major role these behaviors play in Public Health concerns for this segment of the population. 660 college students from three public universities participated were subjected to verbal behavioral and physiological assessment of anxiety. Students responded to a 28-item Checklist of Fears, previously administered to a Spanish speaking population (Alpha=.967, and 68.06 % explained variance) with a four factors structure (fear of affective loss, fear to become a victim of non contingent negative events, fear of vulnerability, and fear of death). The behavioral measure for anxiety consisted of a computerized discriminative 8-minute test based on the emotional version of the Stroop task where positive, negative and neutral words were used as sample stimulus. Interference was computed by subtracting latencies to neutral words from latencies to negative or positive words, of the same length and lexical probability. Before and after the Stroop task, blood pressure and heart rate were monitored. Additional self-report measures of tobacco and alcohol consumption were

recorded. Results showed a significant relationship between Stroop performance, fear to become vulnerable and fear of death, independent of gender. Both tobacco and alcohol consumption were directly related to verbal scores of fear for males, but they failed to associate in the same manner to negative interference scores. Gender produced significant differences only for verbal fear scores, with females scoring higher than males and the opposite tendency for pretest-systolic blood pressure, however no gender difference was found for behavioral scores. We concluded that the gap between reacting with apprehension and "talking about being anxious" is gender sensitive, and both behavioral and physiological reactivity should be taken into account to understand human fears and worries.

Keywords: *anxiety, tobacco consumption, alcohol use, college students, gender*

Biased language in description of domestic violence incidents

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The aim of this paper was to explore biased language use in family violence discourse. Theoretical framework is provided by the Linguistic Category Model (LCM) developed by Semin and Fiedler (1991). The LCM makes a distinction between four different levels of abstraction: descriptive-action verbs (DAV) as the most concrete terms; interpretative -action verbs (IAV), which refer to a general class of behaviors; state verbs (SV) describing an emotional state, but not a specific event; and the most abstract adjectives (ADJ), which generalize across specific events and objects, and describe only the subject. People can choose between these four levels of abstraction to express their beliefs, expectancies and stereotypes. When they use a more abstract language to describe a specific event, they suggest that behaviors are due to some inherent and enduring qualities of acting persons, not to some situational fluctuations or factors outside of their control. Describing behaviors in more concrete terms means that these behaviors are incidental and due to situational

circumstances rather than to some dispositional tendency. The following hypotheses have been formulated: (1) There is a general tendency to prefer more abstract terms to depict an oppressor's behavior; (2) Women are more prone to use more abstract terms in comparison to men; (3) The higher the level of sexism against women, the higher the tendency to use concrete terms in description of an oppressor's behavior. 136 participants took part in the study: men ($n=82$) and women ($n=52$) of mean age of 31 years. They read four stories about domestic violence incidents, where oppressors and victims were either men or women. They were then asked to assess to what extent, in their opinion, four proposed statements might serve as valid and reliable title to each story. Statements represent four levels of abstractness. Additionally, the Ambivalent Sexism Scale was administered in order to measure the participants' level of sexism. Results confirmed Hypotheses (1) that abstract terms were preferred in description of incidents; and (2) that women tended to use more abstract terms than men. As regards relationships between sexism and language abstractness (Hypothesis 3), this was proven only for benevolent sexism. The study indicates that a negative behavior, as in case of domestic violence, is attributed to dispositional traits of an actor rather than to situational factors. This tendency is more pronounced in women than men, probably due to their stronger disapproval of violence, and/or empathy toward victims (women are more likely to be victims). Relationships between benevolent sexism (i.e. positive attitude toward stereotypical women, but negative when women transgress their stereotypical roles) and usage of more concrete terms (i.e. attribution to non-dispositional causes of violent behavior) can be explained as the tendency to justify actions of perpetrator who might be provoked by a transgressed victim.

Keywords: *biased language, domestic violence, behaviour, sexism*

Black racial life narratives: A transnational reinterpretation of black racial identity

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Over the past four decades, there have been considerable theoretical, measurement, and methodological advancements in research on Black racial identity. However, there has been little exploration of the experiences of people outside of the U.S. or on process issues (i.e., how and under what conditions people develop their racial beliefs over time). In this project, I explore the context of racial identity themes among self-identified Black men and women in Australia, Bermuda, South Africa, and the U.S. I am using a (racial) life narrative methodology to examine the common and diverging themes among 60 participants (83% of the in-depth one-on-one interviews have been completed thus far). Approximately equal numbers of men and women are participants and there is an equal representation of participants across sites (e.g., Australia, Bermuda, etc.). The format of the interviews is based on Dan McAdams' life narrative interview protocol. Interviews are conducted at a location of the participant's choice and typically last between 2-4 hours. The taped interviews are transcribed verbatim, double checked for accuracy, and sent to the interviewee for feedback and approval. I am using dimensional analysis to conduct the constant comparative, iterative, and line-by-line analysis of the text. Thus far, a quest for humanity has emerged as a core theme. The initial theme emerged from my interviews in Bermuda. A number of people expressed a desire to be viewed as human [both in a raced and non-racial view]. I reworked this restricted concept of a quest for humanity after conducting several interviews with Aboriginal people in Australia. Participants in this context also talked about humanity as being connected to freedom from external and internal constraints of racial oppression. Colorism and its influence on identity is another dominant theme that is emerging in the data. I am examining the ways in which gender, class, and nationality intersect in the expressions (or not) of the themes. I plan to complete data collection by March and am in the process of analyzing the interviews now.

Keywords: black racial identity, racial identity themes, life narrative methodology, quest for humanity, Colorism

Black Saturday: Treating trauma and loss in the aftermath of the 2009 Victorian bushfires

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This paper will address treatment approaches and outcomes for those traumatized and bereaved as a result of the 2009 Black Saturday Bushfires in Victoria. The paper will present an overview of the clinical presentations of bushfire affected residents in an area where 106 people perished, 1397 homes were destroyed and 40% of the Shire burned. The ferocity of the fires and the loss of life and property have created particularly devastating traumatic outcomes for many of those present on Black Saturday. The paper will examine treatment approaches employed, and treatment outcomes, including psychometric measures of post-traumatic stress disorder (PTSD), depression and anxiety, pre and post treatment. Particular and distinguishing issues and implications for trauma treatment in post disaster settings (compared with traumatic material commonly presented in the course of regular psychological practice) will be discussed. Further, issues of practitioner self care in light of the nature, the severity and the immediacy of the traumatic material presented by clients will be addressed.

Keywords: trauma, bushfires, post-traumatic stress disorder, depression

Body image and reasons for exercise in young adult gym users

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Exercise as a body change behaviour and the variables that impact on this have not been extensively examined. This is of concern as 'at risk' groups such as gym users demonstrate higher negative body image issues compared with non-gym users. This is of particular importance when considering the number of gym memberships are increasing. Therefore, the current study aims to develop a theory driven model to explain gym-specific exercise as a body change behavior based on relevant variables identified by prior research such as

internalisation, body dissatisfaction (BD), drive for thinness (DT), muscularity (DM) and leanness (DL), and motivations for exercise. 103 (65 females, 38 males) young adult (18-29 years) current gym users recruited through gyms, social networking sites and personal contacts, completed an anonymous online self-report questionnaire. In addition to demographic information, the frequency and duration of gym exercise behavior that was either cardio or weights-related was assessed. The questionnaire also comprised of measures examining internalisation, BD, DT, DM, DL and motivations for exercise. As hypothesized, internalisation of the General and Athletic ideal correlated with dissatisfaction with thinness and muscularity, respectively. Additionally, as hypothesised, females demonstrated higher levels of DT and males higher levels of DM, with both genders illustrating DL to similar degrees. Further, these drives were significantly related to motivations for exercise; DT associated with appearance and weight-management exercise motivations, and DM correlated with weight-management and strength and endurance motivations. Path analysis indicated the variables contributed to a well fitting model of exercise behaviour. The model provided pathways from internalisation to muscle or thinness-related BD, resulting in either DT or DM, which, in turn, predicted motivations for exercise, which were associated with engaging in weights as an exercise behaviour. Motivations for exercise did not correlate with engaging in cardio-based exercise. Young adults attend the gym for reasons of toning and strength building with the primary motivation of weight management for both genders. Further, negative body image and associated drives can influence the degree, type and intensity of exercise. This is of relevance when considering obligatory and unhealthy levels of exercise and associated health problems such as disordered eating and use of performance enhancing substances. Therefore, these combinations of variables predict the use of gym exercise as a body change behaviour, warranting further examination of the model.

Keywords: *body image, exercise, body change behaviour, gym users, motivations*

Breaking the change – cynicism cycle: A role for HR?

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Organizational change programmes are usually intended to bring about positive outcomes such as organizational survival and profitability. The attitudes and reactions of employees to change initiatives, however, can have an impact on the success of the change programme. Employees become cynical about organizational change when they have experienced multiple rounds of change initiatives. Organisational change cynicism (OCC) is defined as an employee view that change is futile and management is to blame for the failure of change programmes. In this paper we investigate the role of Human Resources (HR) in mitigating employee reports of OCC. We use HLM to investigate two roles of HR: as an administrative expert (focus on the efficiency of the day to day operations) and as a change agent (focus on people and strategy with a view to overcoming resistance to change). Our level 1 data is from approximately 1800 employees: from this data we generate our dependent variable (OCC) and our independent variable (quantity of organizational change). Our level 2 data is from the HR managers of our employees in 70 Australian organizations (minimum of 5 employees per organisation). From these data we generate two role variables (change agent and administrative expert) to determine if the relationship between the quantity of organizational change and OCC is affected by the role taken by HR. We find that the greater the quantity of organizational change, the higher the level of OCC. However, when HR works as an administrative expert, the relationship between the quantity of organizational change and OCC is strengthened. When HR performs a change agent role the relationship between the quantity of organizational change and OCC is weakened. Our findings suggest new ways to prevent the development of OCC. HR managers who adopt a change agent role can disrupt the change-cynicism cycle and keep employees engaged with organizational change efforts.

Keywords: *human resources, organisational change cynicism (OCC)*

Burnout in Brazilian organizational context: A study with university professors

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The university question in Brazil has been suffering great changes. These changes reflect on the cultural, political and economical history of Brazil and can affect the university professor's health by the manifestation of acute stress and burnout syndrome. This study aims to analyze the socio-demographic characteristics of these professors, such as sex, grade and knowledge area that are involved in the development of burnout. Besides that, the study also analyzes the predictive power of affective organizational commitment on burnout. The participants were 233 university professors of the West-Central area of Brazil. The instruments included the Maslach Burnout Inventory which has 22 items divided into three dimensions: emotional exhaustion (9 items); cynicism (5 items) and personal accomplishment (8 items). To measure the affective organizational commitment variable a Brazilian version of the Organizational Commitment Questionnaire (OCQ) was used. It is a one factor scale. The participants of the study were also asked some socio-demographic information such as sex, grade and knowledge area. The data were analyzed at two different times. On the first one, t-tests and ANOVAs between the socio-demographic variables, affective organizational commitment and burnout were used. On the second one, a stepwise regression was used to verify the predictive power of the socio-demographic variables and the affective organizational commitment on burnout. It was shown that sex is a differential factor for affective organizational commitment and that the knowledge area and grade are antecedent variables of affective organizational commitment. It was observed that the higher the grade, the less affective organizational commitment was found along with higher emotional exhaustion. In conclusion we can postulate that the demands the university professors are submitted to make

them more involved with their personal career and less involved with their institution.

Keywords: *Brazil, stress, burnout, affective organizational commitment, gender*

Can drivers ignore disturbing news?

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The aim of our study was to examine whether passive listening to the news or conversation on the radio affect recollection of prospective memory. Authors randomly divided participants (undergraduates) into three groups and all of them engaged in prospective memory task like which Einstein et al. (e.g., Einstein & McDaniel, 1990) developed. In this kind of task, participants were asked to do recognition memory task or lexical decision task concurrently with reaction (e.g., pressing a key) for the specified words. Group 1 completed the task while listening to news of interest, while Group 2 listened to news of no interest, and Group 3 listened to no news. Results of comparison of mean accuracy rates of prospective memory tasks among groups showed that participants who did task with listening to news of interest tend to have lower accuracy rate than those of other groups although accuracy rates of participants who did task with listening to news of no interest was not different from those of participants who did it without listening to news. Those results indicate that people don't ignore news of interest even if they are listening to it passively and that such an involuntary dedication causes absent-minded failures of remembering things intended to do. Car or train driving demand us some kind of prospective memory. Therefore, we call attention to listening to the radio news while driving.

Keywords: *passive listening, prospective memory*

Can internet-based interventions influence long-term efficacy of trainings?

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In clinical psychology and psychotherapy internet-based interventions (IBI), such as online-therapy, follow-up e-mails and chats have been shown promising for consolidating therapy effects (e.g. Ott, 2003). These approaches, however, are barely used to enhance effects of trainings. This is even more surprising since today there is a substantial imbalance between investment costs and training outcome with only 10 percent of the training-contents being effectively transferred (Georgenson, 1984). The current study investigated whether the long-term effectiveness of a cognitive-behavioral social skills training (Hinsch & Pflingsten, 2007) could be perpetuated using IBI during the four following weeks. Therefore a specific IBI was developed and evaluated with questionnaires measuring self-efficacy, social behavioral habits and attributional styles. The IBI used cognitive-behavioral tasks and elements which were created based on the training contents. These tasks were provided twice a week via Moodle. Participants posted reports about the realization of the tasks in forums and had the opportunity to get assistance by a trainer. The effectiveness of the IBI after training was evaluated over 12 months and compared to no IBI after training, IBI alone and training alone. Results show evidence that IBI can sustain effectiveness of training. Training combined with IBI was superior to the other conditions in a 9-month follow-up. That implies that IBI is one approach to increase long-term efficacy. Based on these findings, ongoing research aims to further clarify the causal role of single elements of the IBI for its effectiveness.

Keywords: *internet-based interventions, training, cognitive-behavioral social skills, effectiveness*

CDSM training: Health professional uptake in daily practice

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The burden of chronic illnesses and lifestyle risk behaviours is well established. Psychologists and other health professionals have a major role to ensure effective client adherence to recommended client-managed treatments for chronic illnesses, such as arthritis, heart disease, diabetes, obesity, and asthma. Additionally,

health professionals can contribute significantly to client self-management changes in health risk behaviours, such as smoking and alcohol abuse. There is a growing requirement around the world for medical, nursing and allied health professional training programs to include strategies, such as motivational interviewing and interdisciplinary models of care, to enhance patient adherence to recommended treatments. The current research aimed to investigate the effectiveness of a training program trained for health professionals. Approximately 200 health professionals across four geographical regions of Australia that represented metropolitan and rural environments, and communities with a high population of Aboriginal people. The health professionals undertook a self-directed 3-hour CD-based training program in chronic disease self-management skills, including motivational interviewing and readiness to change assessment and intervention techniques, early intervention skills for dysfunctional self-talk and emotions, and models of interdisciplinary professional local care. Participants were required to complete an online assessment following completion of the training program. Data on training outcomes, implementation of skills and interdisciplinary meetings will be finalised by May 2010.

Keywords: *chronic illness, risk behaviours, training programs*

Change management and trust in safety critical environments: Small plane safety culture

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Safety culture and safety management practices in commercial and military aviation operations have been based on human factors research evidence for over four decades. However, this is not the case in the small plane environment. Australian small plane operations were completely reviewed in the past decade and the ensuing new or amended rules and recommendations are currently being implemented. Pilots and organizations are expected to manage required change in a timely manner. Management of small plane operations

is quite different to that of large plane operations. Additionally, there is great diversity within the small plane sector itself. Mandatory change management presents particular problems for those who themselves may have limited appreciation for the evidence underpinning incoming changes. There is little direct evidence of current small plane safety culture and safety management knowledge, attitudes and practices. The aim of this project was to assess and report on the state of current safety culture and safety management practices and planning within this sector. An online survey was made available to Australian small plane pilots in Sept-Oct, 2008, about current and incoming safety management requirements and readiness for change management. 426 pilots responded to the survey, mainly from three subcategories: fixed wing VH registered recreational aircraft and balloons. Pilots were asked to rate their own, other pilots, and club or organizational awareness and planning for safety management requirements. Pilot responses were matched against a recognised model of change management stages. Results indicate that knowledge, attitudes and levels of trust correlate with age group, flying experience and aircraft type. These variables are shown to be associated with attitudes to change management and implementation readiness. The findings are consistent with previously established models in which attitudes and knowledge correlate with changes in behaviour, confirming that change management in safety critical environments requires careful planning and adequate inclusion of 'changees' in change management processes.

Keywords: *change management, trust, safety, small plane, pilots*

Changes in observed driver behaviour following extended use of in-vehicle backing aids

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The popularity of larger vehicle types such as sport utility vehicles (SUVs) for transporting

families, combined with the aging of the driving population, may be causing an increase in the incidence of back-over crashes. The aim of the study was to determine whether experience using a backing (or reversing) aid over an extended period would be associated with changes in driver behaviour. Forty-two parent-aged (25-50 years) drivers drove their own vehicle for a period of two months, throughout which it was equipped with one of three types of backing aid: ultrasonic, dash-mounted video, or rear view mirror-mounted video. Before and after this period, driving performance was observed while performing a series of backing manoeuvres, both with and without the use of the backing aid. At the ostensible conclusion of testing, an 'unexpected obstacle' was placed behind the participant's vehicle without their knowledge, and they were asked to reverse out of the parking spot with their backing aid activated. Following the eight week period, drivers made significantly fewer glances to rear view and side mirrors, and made fewer shoulder checks while backing, when they used the devices compared to when performing the same manoeuvres unassisted at the beginning of the study, $F(1, 38) = 34, p < .001$. This difference persisted even when the backing aids were turned off, $F(1, 38) = 20.4, p < .001$, suggesting that experience with the backing aids caused drivers to adapt their visual search behaviour in a potentially safety critical manner. Finally, regardless of backing aid type, the majority (80-93%) of participants collided with the unexpected obstacle, a finding that is consistent with previous similar research (Llaneras et al., 2005; McLaughlin et al., 2003). The high rate of collisions observed in this scenario may have been due to a delay in system activation (for the video-based systems) or because of the unexpected nature of the event, which caused drivers to ignore warnings from the ultrasonic device. Collectively, results indicate that driver behaviour changes in safety critical ways following exposure to backing aids over an extended period of time. Backing aids should not, therefore, be promoted as safety equipment for drivers.

Keywords: *large vehicles, backing aid, driver behaviour*

Charting psychology's progress in demonstrating relevance to the needs of Indigenous Australian people: A review of literature and experience from 1992-2009

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Following a meeting in 1992 to discuss a proposal to develop a four year psychology program for Indigenous Australian students, Reser (1993, 1994) identified several issues, barriers and opportunities regarding the roles and relevance that the profession might have with Indigenous students and Indigenous people generally. Reser outlined not only the structural and practical ramifications of such a proposal, he also made reference to the milieu, or 'contested cultural space' in which such a proposal would need to be considered. This paper outlines aspects of this context, placing particular emphasis on discursive elements of the debate surrounding the proposal at the time, and the consideration of Indigenous issues by the profession since. A literature review was conducted focusing on Australian Psychological Society (APS) policy and guidelines relating to Indigenous people during this period. Journal articles and other commentary on the topic were also sourced. Interviews with persons involved with psychology and Indigenous Australian people were conducted. Participants included Indigenous and non-Indigenous psychologists, students and clients of psychological services. A Causal Layered Analysis (Inayatullah, 2004) was conducted with a view to identifying the varied and interconnected layers of discussion. Activity has been predominant in the 'political sphere' with emphasis placed on validating and entrenching an Indigenous presence in the contested cultural space of Australian psychology. The emergence of bodies, such as the Australian Indigenous Psychologist's Association (AIPA) in 2008/ 2009, are indicative of a renewed imperative to organize and mobilize Indigenous voices and presence within the profession. Furthermore, an emphasis on professional development under the rubric of cultural competence has become increasingly apparent, seeking to address in a conceptually rigorous manner what has been an enduring demand for practical skills enhancement amongst psychologists working with Indigenous

Australian people. Discourses of 'ongoing struggle', and 'reconciliation and partnership' seem to characterize and underpin these developments in recent times. The paper concludes by outlining issues that stand to confront those interested in negotiating psychology's relevance to Indigenous Australian people in this generation and beyond. These will include the structural and apparent parameters that define service delivery and how less apparent discursive underpinnings determine these.

Keywords: *Indigenous Australians, barriers, reconciliation*

Children's categorization of objects: Developing from a conceptually to a perceptually based process?

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Past research on how children categorize objects has resulted in inconsistent findings. Some studies suggest that children use non-obvious properties that can only be identified on the basis of prior-conceptualizing (conception-driven, e.g., both can hold water) or causal characteristics (e.g., both have eyes and can see). In contrast, other studies suggest that children primarily use perceptual (perception-driven; e.g., both round) and other distinctive features (e.g., both have wheels). However, there is still no clear consensus on whether children's categorization is mainly a conceptually or perceptually based process, or whether these two processes operate in tandem. The present research consisting of four experimental studies attempted to understand factors affecting children's categorization process. Considerable effort has been exerted to determine conditions that would facilitate young children's use of the conception-based mechanism, particularly when they have little prior knowledge about the conceptual attributes of the targeted objects (Gentner & Markman, 1995b; Mussweiler & Gentner, 2008). More recently, it has been suggested that children tend to categorize attributes and compare their functions and conceptual characteristics when they have enough conceptual knowledge and experience

about these objects (Gentner, Loewenstein, & Hung, 2007; Namy & Gentner, 2002; Uttal, et al., 2008). The current study proposed that the basis of children's categorization varied developmentally from a conceptual to perceptual preference with the increase of their knowledge about the objects in the world. In four experiments, we modified tasks from earlier studies (e.g., Namy & Gentner, 2002; Uttal et al., 2008) and investigated the categorization mechanism of a total of 116 four-year-old children. These four experiments investigated with (i) tasks that were conceptually-matched, but not perceptually matched, (ii) tasks of different familiarity, (iii) tasks with different familiarity with the relationships among them, and (iv) tasks with manipulation on their visual hints and background information. The results suggest that young children can actively use the conceptually driven mechanism during the comparison process if there are opportunities for them to focus on these conceptual properties. Young children could also categorize unfamiliar objects in the presence of familiar objects on the basis of their conceptual information.

Keywords: children, categorization, conceptual processing, perceptual processing

Chinese entrepreneurs' motives: Pushed or pulled?

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We conducted a field survey with a sample of actual Chinese entrepreneurs in Jiangxi and Hong Kong ($N = 86$). One research goal was to examine the multi-dimensionality of entrepreneurs' motives: whether Chinese business owners opened their own business because they were "pulled" or attracted to advantageous factors associated with entrepreneurship, or because they were "pushed" or trying to escape undesirable factors surrounding their previous employment, or both. We also investigated the personality

correlates of entrepreneurs' perceived business success and satisfaction. This study utilized the survey method with two convenient subsamples of actual entrepreneurs from Hong Kong ($n=26$) and Jiangxi, China ($n=60$). Participants were recruited from the authors' local networks and were instructed to return completed surveys to the researchers by mail. The response rates were satisfactory (65% in Hong Kong and 83.33% in Jiangxi). Participants were mostly male and were, on average, over 40 years of age. Most of them owned small and medium enterprises (69.6%). The survey consisted of a constructed entrepreneurial motives, a constructed perceived business success scale, Bass' (1997) entrepreneurial satisfaction scale, Triandis et al.'s (1986) individualism-collectivism scale, Goldberg's (1999) big-five personality dimensions, and a demographic questionnaire. Most measures were translated into Chinese and back-translated by bilingual researchers. Most measures yielded at least adequate internal consistency levels. In terms of Chinese entrepreneurial motives, consistent with qualitative findings by Nguyen and Nguyen (2008), factor analyses showed that participants endorsed four categories of "pull" motives (e.g., to have a challenging and meaningful career) and four categories of "push" motives (e.g., to escape stress and/or heavy workload in previous employment). A majority of participants also endorsed an altruistic motive (i.e., to help family or community members in need of employment). In terms of the correlates of perceived business success, the Big-Five personality traits were significant predictors, with Openness to Experience explaining the highest percentage (19.2%) of the variance accounted by personality. Whether participants were more collectivistic and less individualistic also predicted perceived success, with (the lack of) Self-Reliance explained the most (12.4%) of the variance accounted by individualism-collectivism. In terms of participants' satisfaction with their enterprise, the variance was also explained by personality, some individualism-collectivism dimensions, and the endorsement of several entrepreneurial motives. Number of years in business, business size, participants' age, and number of work hours correlated with either perceived business success or overall satisfaction. The present study provided empirical evidence to support Nguyen and

Nguyen's (2008) grounded theoretical framework of entrepreneurial motives and their correlates. The results revealed a complex pattern of motives with some unique characteristics (altruistic; collectivistic) that may distinguish Asian entrepreneurs from their western counterparts. Future cross-cultural, comparative research may shed further light on these findings. Theoretical and practical implications were discussed.

Keywords: *Chinese entrepreneurs, motives, pulled, pushed*

Chronic disease management in the community: The nurse educator programme

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The National Health Survey 2004 showed the prevalence of diabetes, high blood pressure and high blood cholesterol among Singaporeans aged 18–69 years to be 8%, 25% and 19% respectively. This prevalence is considerably higher in persons aged 40 years and above. In all, an estimated 1 million Singaporeans suffer from one or more chronic conditions such as diabetes, high blood pressure and high blood cholesterol. The Survey also showed that 27.6% of those with diabetes had unacceptable blood glucose control and 50.5% of hypertensives had poor blood pressure control. Patients with uncontrolled blood glucose and blood pressure are likely to suffer complications such as stroke, heart disease, renal failure and amputations. Besides medications, lifestyle changes e.g. exercise and diet is critical for the patients to control their conditions. The majority of patients with chronic disease(s) are managed by doctors in polyclinics (government clinics) and private practices. However, feedback has shown that the doctors often do not have the time to educate their patients on the holistic management of their conditions, in particular, the necessary lifestyle changes e.g. nutrition, exercise. To close this gap, the Nurse Educator (NE) program was developed. Individuals detected with a chronic disease through the Integrated Screening Program or as part of their

routine visit to their doctor, are referred to trained Nurse Educators (NEs). Participants attend three group psycho-educational sessions with the NEs that include a health risk assessment, creating action plans with achievable goals, identifying barriers to achieving these targets and methods to overcome these barriers. The workshops are conducted in English, Mandarin and Malay. Working closely with the Wellness Program, a community-based program with health and social inclusiveness as its focus, participants are also referred to physical activity and nutrition program within the community. Pre- and post-workshop evaluation questionnaires are administered to measure learning outcomes. NEs conduct follow-up with participants through phone calls at 6 and 12 months post-workshop. Participants' lipid levels, blood pressure and/or HbA1c test results will be recorded at the end of 12th month. The pre- and post-workshop evaluation on knowledge and attitudes showed a 45.6% improvement. At the 6-month telephone follow-up, 51.4% of participants showed an improvement in their confidence in making lifestyle modifications (i.e. in relation to physical activity, medication compliance, weight control and healthy eating) and 48.6% of participants reported adopting healthy lifestyle practices. The one-year data will be ready in April 2010. This is a three-year community-based program that focuses on lifestyle modifications that will assist with the management of chronic disease patients. Working with GPs, and through empowerment and education, individuals are taught ways to better manage their health through lifestyle changes.

Keywords: *nurse educator programme, chronic disease, community, lifestyle*

Civic competence development of 9-13 years old Dutch youth

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This study has followed the development and individual differences in the domain of civic competence during the last three classes of primary education. Civic competence was

assessed using a civic competence questionnaire (Dam, Geisel, Ledoux & Reumerman, 2009). Four components of civic competence were assessed separately: knowledge, attitude, skill, and reflection. In turn, each component was divided into four social functions: social responsibility, conflict resolution, democratic behavior and dealing with differences. 265 secondary school pupils of 9 to 13 years old took part in the study. To strengthen the conclusions concerning the changes in civic competence, these changes were assessed both cross-sectionally and longitudinally: three age groups were compared and one group of students was followed for three years. The results have shown a significant improvement between 6th and 8th grade in terms of knowledge, but not regarding the other three components. There were also significant differences between genders, in favor of girls. The results suggest that pupils experience an increase of civic knowledge between 6th and 8th grade, but this increase does not seem to be accompanied by analogous improvement of the other three components of civic competence (i.e., attitudes, skills, and amount of reflection).

Keywords: *civic competence, Dutch, young people, education*

Client threats as experienced by West Australian psychologists

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Researchers found that psychologists experience threatening behavior from clients in their professional practice. No published research has been undertaken in Australia to determine what the local situation is. A feature of the published research is that researchers have generally used surveys to collect the relevant data. The data therefore do not indicate exactly what type of behavior psychologists experience as threatening. The aim of this stage of a more comprehensive project was to explore what type of client behavior Australian psychologists experience as threatening. This data will be used to develop an instrument that can be used to examine Australian psychologists' experience of threats. This qualitative study was guided by a

phenomenological approach. Semi-structured interviews were used to collect data from 15 Western Australian psychologists. Participants were recruited by using a purposeful sampling method to ensure that they varied in terms of gender, experience, therapeutic modality they use, clientele, and workplace characteristics. The data collected from these interviews were analysed using thematic analysis. Psychologists' experiences of client threats could be categorised into nine types; Physical Aggression, Threat of Physical Aggression, Stalking, Threats to Loved Ones, Indirect Acts of Aggression, Verbal Aggression, Emotional Manipulation, Boundary Violations, and Threats to Competence. The level of threat in each of these categories can differ on a continuum. These findings suggest that Western Australian psychologists' definition of threatening client behavior is broader than that typically used by researchers who survey psychologists about client threats. Psychologists reported that they constantly experience a range of client behaviors as threatening, but with different levels of intensity that range on a continuum. Psychologists' responses to these threats differ depending on their perception of the level of the threat.

Keywords: *threatening behavior, Australian psychologists, thematic analysis, intensity, perceptions*

Clients' understanding of professional boundaries in psychological services

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The aim of this study was to examine perceptions of boundaries, boundary blurring, and boundary crossings in embedded and non-embedded communities among clients of psychology services. Utilising qualitative and grounded theory research methods, 29 psychology clients aged between 20 and 64 years from both non-embedded (urban) and embedded (e.g., rural; and gay, lesbian) settings participated in in-depth interviews. Seventeen grounded theories were identified. Three key findings are presented here. Firstly, many clients

found it difficult to define boundaries, and had low awareness of boundary issues or how to deal with potential boundary crossings. Second, beliefs about boundary crossings were socially constructed and varied significantly according to the context of the situation. Third, there was similarity in how clients from embedded and non-embedded communities understood and dealt with boundary issues; however, the rural embedded sample deemed boundaries harder to manage. These results have implications for professional practice. There is a need to educate clients about boundaries and how to deal with boundary crossings and violations. Additionally, clients need to be supported to develop an 'informed client identity' that is conducive to their expectations of handling boundaries in treatment.

Keywords: *boundary crossings, boundary blurring, non-embedded communities, embedded communities*

Climate, politics, and performance of public organizations: a cross-level analysis of public schools' biosphere

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Public organizations highly depend on building constructive environments and encouraging a healthy climate that leads to higher performance. Throughout the years, questions about organizational climate, organizational performance and their mutual relationships have been studied extensively and from multiple perspectives such as management, public administration, organization studies, psychology and sociology. This study builds on accumulated inter-disciplinary perspectives to examine the contribution of multiple climates to organizational performance both on the Micro-individual level and on the Macro-organizational level. It is suggested that examination of multiple climates (participative, innovative, leadership, and service), as well as organizational politics, can improve our understanding of micro and macro level performance of public organizations. A field study of 2102 teachers from 108 public schools

and 3 major districts in Israel was conducted between November 2004 and June 2005. The teachers answered the climate questionnaire and archive data about school and students achievements, socio-economic rank of the schools, school size, level of teachers' self-reported absenteeism, and reports on group level OCB was also collected. Data was analyzed on the basis of Random Coefficient Modeling as this approach allows for testing the nesting of teachers within schools. The findings indicate that multiple climates in the school environment are positively related with micro-level performance and this relationship is mediated by organizational politics. In addition, both organizational climate and micro-level performance are related with macro-level performance. Our findings emphasize the impact perceptions of organizational politics have in explaining the relationship between climate and performance in public organizations. Additional theoretical, methodological and practical implications are discussed. The paper supports further investigation of multiple climates in public organizations and exploration of their complex relationship with politics and with multi-level performance indicators.

Keywords: *climate, politics, performance, organisations, micro-individual/macro-organisational levels*

Clinical features in the children's psychological assessment

SILVA, R. (Santa Cruz do Sul University), SILVA, M. (Santa Cruz do Sul University)

Children and adolescents develop mental disorders due to emotional, environmental or developmental stress situations. Psychological evaluation by managing specific instruments provides comprehension of possible causes for these disorders. This study identifies clinical symptoms of a sample of children referred for psychological evaluation, as well as demonstrates statistical association between the symptoms with their age and sex. In this study 849 children protocols have been analyzed aged between five and 12 years old, which included data from medical history interview or from CBCL (Child Behavior Check List). The

information obtained were imputed into a database on SPSS version 11.5 for Windows and analyzed by scanning frequencies of the variables and by the association of measures using the chi-square test. The predominant age group in this evaluation was between 9 and 10 years (34.2%), having more male children (66%). Through interviews of anamnesis, the most frequent symptom was learning disabilities (23.8%). According the CBCL, internalizing symptoms had higher occurrence (55.5%). Through the association between child's age and clinical symptoms, learning difficulties showed a significant association ($p = 0.000$), as well as age and presence of seizures ($p = 0.000$). It's also found a significant association between sex and anxiety symptoms, insecurity and fear ($p < 0.05$). Across the protocols evaluated it is possible to conclude that the treatment search is so late for children between 9 and 10 years. Learning disability was the prevalent symptom, proving that the school is the place where the child expresses his cognitive, personal and family difficulties. Moreover, age is relevant to the onset of symptoms linked to learning and to the presence of seizures. Furthermore, sex means to be the most relevant factor related to the internalizing disorders according to the CBCL's proposal. The importance of this identification is to promote stimulation to the mental health professionals to work in a preventive manner, helping families to identify symptoms in their children earlier.

Keywords: *children, mental disorders, stress, psychological assessment, learning disabilities*

Clinical, comorbid, and psychological characteristics associated with HIV across decade of life

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Of the 1.1 million adults infected with HIV in the United States, those adults 50 years of age or older made up 15% of all new HIV diagnoses, 24% of those living with HIV, 29% of those diagnosed with AIDS, and 35% of those who died of AIDS. Similar trends have been found in Australia and Europe. With the increasing number of older adults with HIV, healthcare

professionals will need to know what to expect as this population ages. This cross-sectional study examined the medical records of 1,478 HIV patients from a university clinic from May 2006 to August 2007. Clinical characteristics and patterns of comorbidities were examined across each decade of life. Data reflected that older adults with HIV were more compliant with medical appointments; this suggests an opportunity to reach older adults and educate them about successful aging with HIV. Meanwhile, younger adults with HIV were less compliant to medical appointments which indicate an area of need. In addition, older adults with HIV had lower HIV viral loads but had more comorbidities in many cases several fold higher. Such comorbidities included hypertension, hypogonadism, hypercholesterolemia, coronary artery disease, and diabetes. The increase in these comorbidities can have detrimental effects on brain health and cognition; this may help explain some of the cognitive problems observed in older adults with HIV. Interestingly, there were no differences in the prevalence of depression (38% to 45%) or anxiety (12% to 20%) across age groups. Implications for practice and research are provided.

Keywords: *HIV, clinical characteristics, patterns of comorbidities*

Coach impact in a process of managerial coaching: A case study

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Executive Coaching theory is relatively new, consequently there are very few empirical studies in the field linking Coaching and managerial abilities development. The most relevant research in the field refers, to the analysis of job performance and productivity (Genger, 1997; Mc Govern et al., 2001; Miles & Huberman, 1994), Individual learning factor, (Harris, 1999; O'Brien, 1997; Witherspon & white, 1996), Self-Awareness and Developmental Goals (Kampa-Koesh, 2001; Laske 1996), Leadership Effectiveness and Coaching (Kampa-Koesh, 2001), Coaching

effectiveness amount customer perspective, (Gwynne Dawdy, 2004), and Coaching and stress (Gyllensten & Palmer, 2006). This research aimed to evaluate a coaching program that analyses perceptions around participants' performance, their superiors and collaborators performance, and organizational development. In order to analyse the impact of coaching several issues have been incorporated into the analysis, such as seniority, type of post, time on managerial post and kind of coach. The study was a quantitative analysis that makes uses of survey data on a sample of 108 managers (out of a population of 143) from a financial services cooperative in the Bask Country, Spain. The questionnaire for evaluating the process of training in managerial tasks and abilities were designed by the research team. The level of analysis were perception of superiors' development, own development, collaborators development and organizational development at 9 different levels: leadership, definition and planning of strategy, personal development, alliances and resources, processes, clients outcomes, peoples outcomes, society outcomes and key outcomes. For participants, the organization has progressed considerably from 2007 in central issues as leadership (20%), Strategy definition (26%), people's development (27%), Alliances and Resources (21%), processes (18%), clients outcomes (17%), peoples outcomes (19%), society outcomes (18%), key outcomes (20%). *Coaching Effect* has an important impact on respondents' perception of own professional performance, above-managers performance, collaborators performance and *Organizational Development*. The above-mentioned impact of *Coaching Effect* on *Organizational Development* is, however, limited (around 7% of explained variance). Variables such as type of post (central or provincial office); seniority (time in the organization); time on post, and type of coaching (team and methodology) has proved to be not influential on coaching, in this study.

Keywords: *executive coaching theory, managerial competence, organisational development*

Cognitive and motivational predictors of achievements of gifted students in math, humanities and music

SEKOWSKI, A. (John Paul II Catholic University of Lublin)

The paper presents results of a study on the psychological conditions of school achievement of gifted students. The study was based on Renzulli's theory of giftedness and Sternberg's theory of successful intelligence. Experiments were conducted in Poland and Germany. School achievement of gifted individuals enables diagnosis of underachievers as well as optimization of the achievement of other gifted students. The participants were secondary school students. They were divided into groups of students with outstanding school achievements and those with average school achievements. Also the type of achievements, including achievements in math, humanities and music, was taken into account. The following testing tolls were used: Raven Matrix Scale, Rokeach Value Scale, Costa and McCrae's NEO Five-Factor Inventory (NEO-FFI), Urban and Jellen's Test for Creative Thinking-Drawing Production, and Sears' Self-Esteem Inventory. The results point to significant differences in the psychological functioning of gifted and average students. The differences concern the level of intelligence, creative abilities, the system of preferred values and self-esteem. This also refers to the type of achievements. Students with outstanding esteem achievements in math had a high level of intelligence, a high level of creative abilities, a high self-regarding their functioning at school, and a low self-esteem regarding their social functioning and their fitness in sports. Students with outstanding linguistic achievements had a high level of intelligence, a high level of creative abilities, and a much higher self-esteem regarding their social functioning than mathematically gifted students. Musically talented students had a high level of creative abilities, a high general self-esteem, and a preference for artistic and esthetic values. The paper presents a comparative analysis of scores obtained by the examined groups of students for all the tested variables. The results indicate a significant dependence of school achievement on intellectual factors, as well as on self-esteem and preference of values. Underachievement of

gifted students is mainly associated with low self-esteem and impairments of social functioning.

Keywords: *gifted students, cognitive predictors, motivational predictors, school achievement, intelligence*

Collective affective identity: The Paradox of sustainable membership

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The question as to what motivates professionals to participate in and contribute to professional membership associations is challenging to all associations' executive committees. Arguably, such professional communities invite member participation in: professional development events; committee meetings; advisory groups; and selected projects. However feedback from such executive committees is that of the continual need to address issues of return on investment for membership subscription. This research uses two theoretical frameworks to understand what motivates professionals to participate, exploring: socio-emotional motivational differences; and dual psychological processes. Theoretically, socio-emotional selectivity theory argues that older adults are motivated by more positive emotional experiences and are selective with social networks; whereas younger adults are motivated by seeking knowledge, information and meaningful participation. Furthermore, a social movement framework posits that a collective identity process; and a cognitive process are responsible for participation. Consequently a three dimensional construct, Collective Affective Identity emerged based on: micro, meso, macro levels of identity; social and affective needs; and is analogous of the affective half of the dual process. Similarly a Return on Investment construct emerged to complete the cognitive dual process analogy. A professional psychological association was examined, with participants being members of the College of Organisational Psychologists. One hundred and ninety nine members participated at Time 1; one hundred and fifty members participated at Time 2; which included eighty four members who provided longitudinal data. There was an

eighteen month interval between the two identical questionnaires, and these were advertised on-line through the college. Results indicated that Collective Affective Identity both mediates and moderates the relationship between Return on Investment and three levels of participation: Co-production; Organisational congruence; and Intention to stay. Furthermore results revealed a career life-span effect, consistent with motivational differences between younger and older generations. Paradoxically collective affective identity, rather than return on investment, was found to be the primary motivator for sustainable membership levels. This exploratory research contributes to areas of: socio-emotional literature; collective identities; generational diversity and professional membership participation. These findings conclude that Collective Affective Identity shows potential for manipulation in individuals to encourage professional and personal growth, leading to: increased collaboration; and membership sustainability.

Keywords: *professional membership associations, participation, motives, collective affective identity, membership sustainability*

Collectivistic and individualistic value orientation, coping style, and trauma symptoms following life adversities among adults in Singapore

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Studies on Western samples have found that individuals who place more emphasis on individualism tend to use more direct coping strategies, which are in turn related to better adjustment following life adversities. The present study aimed to determine associations between individualistic and collectivistic value orientation, coping style, and trauma symptoms among adults residing in a multi-cultural and non-Western country of Singapore. It also investigated the influence of the interplay between value orientation and coping style on trauma and depression symptoms. A community sample of 947 adults in Singapore who had experienced various life adversities were recruited. Participants were invited to complete anonymous questionnaire consisting of

psychological scales on life adversities, cultural and value orientation, coping style, and trauma and depression symptoms. Bivariate correlations were conducted to delineate associations between variables. Hierarchical regression analyses were also performed to investigate whether coping style moderated the association between value orientation and trauma symptoms. Results of bivariate correlations indicated that trauma and depression symptoms were associated with experiences of life adversities at a younger age, female gender, being single, without employment, individualistic value orientation, and negative coping style. After controlling for demographic characteristics and age of life adversities, intrusive symptoms were best predicted by negative coping. Significant individualistic orientation x negative coping 2-way interaction effects were found for arousal and avoidance symptoms. In particular, the association between individualism and arousal and/avoidance symptoms were found among participants with high levels but not low levels of negative coping. For depression symptoms, a significant collectivistic orientation x positive coping 2-way interaction was found. Among participants with low collectivism, depression symptoms were related to low levels of positive coping. Among participants with high collectivism, depression symptoms were related to high levels of positive coping. Prevailing literature may not accurately reflect associations among value orientation, coping, and adjustment of individuals from non-Western countries with varying degrees of collectivism and individualism.

Keywords: *individualistic value orientation, collectivistic value orientation, non-Western culture, coping styles, trauma*

Colour psychology and colour therapy: Ancient knowledge or new age nonsense?

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Colour psychology and colour therapy, which is part of an alternative therapy industry with an annual turnover of \$620m in Australia, rests on the assumption that colour prompts a range of cognitive, affective and behavioural responses. Colour therapy as a practice exists outside the

jurisdiction of a regulatory body or the Therapeutic Goods Act. This research sought to determine the veracity of the link between colour and human response. This research incorporated a critical review of literature relating to colour and human response from academic/scientific sources. A meta-analysis was also conducted to examine studies that focus on cognitive, affective and behavioural responses to colour, and studies relating to the practice of colour therapy. In addition, a critical review of colour psychology and colour therapy claims and assertions commonly found in non-academic, non-scientific sources (such as popular media and the Internet) was included. The results indicate that an association between colour and cognitive, affective and behavioural responses is less than weak. A range of factors such as individual differences (such as screening ability) and cultural variations as well as perceptual, contextual and temporal factors influenced the interface between colour and human response. In addition, substantial variation was found in terms of the methodological rigor of studies relating to colour and human response. Furthermore, many of the claims and assertions commonly found in non-academic, non-scientific sources relating to colour psychology and colour therapy were found to be baseless and unsubstantiated. Providing benchmark research into colour psychology and colour therapy, this research highlighted the alarming disconnect between academic, scientific literature relating to the interface between colour and human response, and the lack of an evidence-based foundation common to the colour psychology and colour therapy industry. Further research will endeavour to identify the size, extent and nature of the industry in Australia, the quality of information provided to patients, and determine the extent to which colour psychology and colour therapy are used to treat serious conditions.

Keywords: *colour therapy, cognitive responses, affective responses, behavioural responses, evidence-based research*

Combating wood smoke pollution using behavioural and technological solutions: a case study of Armidale, a regional town in NSW, Australia

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Winter levels of air pollution in Armidale regularly exceed the national standard for airborne particulate matter. Most of these winter emissions come from wood heaters, the main source of heat for about one third of all households in the city. The present study evaluated the effectiveness of two strategies: the first involving education materials and the second involving a technological intervention using SmartBurn canisters, which are designed to help fires burn more efficiently and reduce emissions. 316 participating households (Participants' Mean age=48.80 years, SD=14.64) were randomly assigned to one of the four experimental conditions: (1) Education only, (2) SmartBurn only, (3) Education and SmartBurn, and (4) No intervention (control group). Household wood smoke emissions were assessed at pre- and post-intervention. A 2 (Education/No Education) x 2 (SmartBurn/No SmartBurn) analysis of covariance (ANCOVA - with pre-test scores of smoke emissions used as a covariate) was conducted to examine the effectiveness of two wood smoke reduction strategies. Results indicated statistically significant main effects for both education and SmartBurn interventions ($p < .05$). Contrary to our prediction, education by SmartBurn interaction failed to reach statistical significance. However, there is a trend for households in the education and SmartBurn condition to produce lowest smoke emissions than that of all three conditions (education only, SmartBurn only, and control group). In first of its kind experimental trial of comparison of two wood smoke reduction strategies, our findings suggest that either strategy was effective in significantly reducing household smoke emissions. An important finding is that a cost-effective strategy such as providing information about best practices related to firewood purchase and storage and wood heater operation can be as effective as using a technological solution in reducing smoke emissions.

Keywords: *air pollution, wood heaters, SmartBurn canisters, smoke emissions*

Community perceptions of older child victims of child sexual abuse in comparison to adult rape victims

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The aim of this study was to investigate community perceptions of older children in comparison to adult victims of child sexual abuse (CSA). It was hypothesised that a 15-year-old victim of child sexual abuse would be perceived similar to a 20-year-old rape victim with regards to (a) victim credibility, (b) victim culpability (c) cognitive competence, and (d) that a 15 year-old female will be perceived as a "quasi-adult". 173 participants were randomly allocated to one of two versions of the Knowledge and Perceptions of Child Sexual Abuse Questionnaire. This questionnaire was comprised of 28 items assessing participants' perceptions of credibility, culpability and cognitive competence of either a 15 year-old or a 20 year-old female who had been sexually abused. Participants comprised 53 males and 120 females, aged 18 to 60 years ($M = 30.1$, $SD = 13$ years). The results indicated that a significant proportion of participants perceived a sexually abused 15 year-old female to be similar to a 20 year-old sexually abused female. A series of Chi-Square tests of independence revealed support for all predictions. That is, a 15 year old victim of child sexual abuse was perceived similar to a 20 year-old rape victim with regards to victim credibility, victim culpability and cognitive competence. The hypothesis that 15-year old child sexual abuse victims are treated as 'pseudo-adults', was also supported. According to Australian law, there are legislative differences between child sexual abuse and adult rape allegation. For example, consent does not constitute a defence in child sexual abuse cases; which includes 15 year-old victims. Yet, the current results indicate that 15 year-old child sexual abuse victims are perceived more similarly to 20 year-old adult rape victims. Thus, the perceptions of older children are not in congruence with current legislation. The legal implications of these findings will be discussed.

Keywords: *community perceptions, victim credibility, child sexual abuse, rape, cognitive competence*

Comparative effects of the use of sad induction procedures and music on driver's performances

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Contrary to anger and aggression, sadness is not inherent to the driving situation and researchers face methodological limits to investigate its impact on performances. This study therefore aims to explore the effects of the use of imagery inductions, i.e. autobiographical recall and combined vignettes and music procedures, as well as the use of sad music to generate and maintain driver's sadness and assess its effects on behavior. Thirty-three participants were divided into three groups: (a) controls which were neutrally induced, (b) "autobiographical recall" participants which were invited to recall eight sad personal events and (c) "imagery" participants which had to imagine eight dramatic described situations with sad music in background. After it, participants drove for 15 minutes on a static simulator. During this session, neutral and sad music extracts were presented in background to reinforce the induction effects. At the end of the experiment, participants were interviewed about their feelings and performances. Analyses of scores on the PANAS X (subjective scale to assess mood changes) showed a high increase of sadness and a decrease of joy only when participants were negatively induced with the imagery procedure. Additionally, they drove faster (114 km/h) than the two other groups (controls = 99 km/h, autobiographical recall = 101 km/h). This increase of mean speed was reinforced when sad music was presented during the driving task. In post-interviews, "imagery" participants said they were conscious of their sadness and were in a favorable situation for ruminations. As a consequence, they voluntarily focused on their driving task to inhibit the induction and music effects. The imagery procedure seems to be the most efficient way to induce sadness and affect emotional state, leading to as a deterioration of driving performances. The effects were strengthened with music during driving which appears to be a relevant tool to promote a sad and gloomy environment, propitious to ruminations. This procedure is relevant to assess

the effects of inattention due to ruminations while driving.

Keywords: *sadness, driving behaviour, imagery, music*

Consumer psychology: Personality profiling to forecast consumer demand

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N. (California Southern University)

Applied psychology in the area of consumer psychology is used to create models for predicting consumer demand for products. Traditional economic models used in forecasting are based on linear regression, with a limited number of variables to predict consumer demand for a product line. However, artificial intelligence techniques including neural networks and embedded systems are used to analyze data with a larger number of variables and larger data sets to examine trends and predict consumer demand to a more efficient level than ever before. Data will be examined from several applications used in a retail environment in Asia, the US and Australia, comparing traditional statistical methods using linear techniques to non-linear neural network outputs. Cognitive Science as a specialized field of Psychology, combining many disciplines, is now providing the foundations for more effective models to predict consumer behavior in the area of consumer psychology. The industrial applications of such software to help managers with both human and fiscal resources in their companies is exciting.

Keywords: *consumer psychology, consumer demand, forecasting, cognitive science*

Co-occurring health complaints: The cumulative impact on employee productivity

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Although the literature on the indirect costs of health conditions on worker productivity has developed considerably over the past 10 years, no studies have examined the co-occurrence of related conditions and their impact on productivity. Acknowledging that physical and mental conditions rarely occur alone, this study sought to explore the underlying factor structure of 13 psychological and physical conditions frequently observed in the workplace, and to examine the relative contributions of condition factors on productivity. A total of 667 employees from a large international commercial manufacturing firm in Hamburg, Germany completed a self-report questionnaire addressing 13 common health complaints, and their impact on productivity. Exploratory Factor Analysis (EFA) was performed to determine whether the underlying factor structure was theoretically sound. Confirmatory Factor Analysis was subsequently performed to obtain parameter estimates and model fit indices. The analyses yielded support for three underlying condition factors: (1) psychological /mental, (2) episodic/acute, and (3) medical/chronic. After adjusting for the effects of self-report bias and co-variance, the psychological/mental factor accounted for over 50% of productivity lost due to absenteeism and presenteeism in the organisation. Given the relatedness of the health complaints within the three factors, the development of workplace interventions that address multiple health complaints may be more efficacious, cost-effective and manageable for the organisation than multiple single condition interventions.

Keywords: *worker productivity, health conditions, Germany, health complaints, workplace interventions*

Coping behaviour and quality of life of a sample of women who experienced sexual abuse in childhood

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The article aims to determine what women who experienced sexual abuse in childhood coping behaviour's are and how these impact on their quality of life in adulthood. A case study design

was used. Individual interviews were conducted with ten randomly selected women with abusive experiences in their childhood. The participants were women ranging between ages 18 and 55 years. The transcribed data from the interviews were analyzed and reflected upon in light of the research questions. The life outcomes of women who experience childhood sexual abuse are generally adverse, yet some of these victims manage to overcome the abusive relationship and experience posttraumatic growth and through this are able to survive, prevail and even experience health, well-being and overall quality of life. Positive changes occurred in these women's experience of their struggle with childhood trauma. Protective factors which affect psychological adjustment in the face of sexual assault are positive subjective experiences, positive individual characteristics, positive communities and positive social relationships. The potential mediator of the posttraumatic growth link is that of coping behaviour. Trauma can provide the impetus for personal and social transformation. The different protective factors identified in the study have played a definite role in the adjustment and quality of life of these women survivors of childhood sexual abuse. These factors make a valuable contribution to the development of an intervention program aimed at reducing adverse risk behaviours and promoting psychological well-being (coping and quality of life) in these women.

Keywords: *coping strategies, quality of life, women, child sexual abuse, trauma*

Core self-evaluations and core other-evaluations: Their roles in organizational behaviors

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Core self-evaluations (CSEs) is the fundamental assessment of an individual's value, effectiveness, and capacity as a person (Judge, Erez, Bono, Thoresen, 2003, p304). This super trait is included in Judge, Lock, and Durham's (1997) core-evaluations system and has attracted a lot of research attention in the field of organization psychology for the last decade.

In spite of this, another super trait in the core-evaluations system, core other-evaluations (COEs), is neglected by researchers. COEs can be defined as one's basic evaluation about the human nature of others (e.g., trust, cynicism). Given that social perception and interpersonal judgment is an important part of organizational life, COEs also deserves academic concern in addition to CSEs. Therefore, the purpose of this study is to untangle the roles that CSEs and COEs play in organizational behaviors by exploring their differential relationships with other personality traits (five factor models, narcissism, and altruism) and work satisfaction (job satisfaction and supervisor satisfaction). Using questionnaire survey, this study collected a sample of 340 respondents from different occupations. To reduce common method bias, this study distributed CSEs and COEs questionnaire first (time 1), followed by another questionnaire including other personality traits and work satisfaction to the same respondent one month later (time 2). Regarding the relationships of CSEs and COEs with other personality traits, the results of partial correlation showed that conscientiousness is positively correlated with CSEs, and this relationship is stronger than conscientiousness-COEs correlation. Neuroticism is negatively correlated with CSEs and COEs, but these two correlations are not significantly different. Extraversion is positively correlated with CSEs but not COEs. In addition, narcissistic personality is positively correlated with CSEs but negatively correlated with COEs. Altruism is not correlated with both CSEs and COEs. Regarding the relationships of CSEs and COEs with work satisfaction, the results of hierarchical regression revealed that the predictive effect of CSEs on job satisfaction is greater than that of COEs, whereas the predictive effect of COEs on supervisor satisfaction is greater than that of CSEs. This study not only extends our understanding of the nature of COEs which is seldom explored in past literature, but also adds to the evidence regarding the nomological networking of CSEs and COEs.

Keywords: *core self-evaluations, core other-evaluations, organizational behaviors, personality traits, work satisfaction*

Corporate social responsibility: Conflict or opportunity for the oil industry

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Oil Industry generates the least desirable impacts on environment, especially in the developing countries, according to International public opinion. Against this background, this research aims at showing the efforts made by all involved actors in developing countries, in order to achieve a more sustainable development of our ecosystems. This research describes a negotiation process among indigenous communities, municipalities, petroleum companies and the Bolivian State, working through social conflict to a viable and sustainable agreement in the frame of the policy of corporate responsibility of one of the most important oil companies in Latin America. The methodology is two-fold: firstly, in-depth interviews of principal actors of the process are gathered, and secondly, focal groups developed for the search of agreed by consensus solutions. The principal result of the study is a sustainable environmental and social proposal, replicable in similar contexts in the frame of the Human Sustainable Development. More concretely, the creation and developing of the second indigenous oil distribution company in Latin America. The first conclusion is the development of Social Corporate Responsibility with a high economic, social and environmental commitment, even in the most adverse socio-environmental conflict. The second conclusion is the need for an agreement within the Oil Company before attempting to reach an external agreement with other stakeholders involved in the conflict.

Keywords: *corporate social responsibility, oil industry, human sustainable development*

Counselor education in United Arab Emirates: A 'SWOT' analysis

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The counseling profession in the United Arab Emirates (UAE) is relatively new. As a new field in the Gulf region, it encounters a lot of challenges that needs to be carefully addressed, so as to promote awareness about the value and application of the field among scholars, professionals, practitioners, and the population in general. Despite this, the need for the discipline cannot be underscored enough, due to the ever increasing number of individuals and groups needing counseling services in the background of a society that is under tremendous social change. Added to many other benefits, is the fact that in a traditional setting, counseling serves as an alternate, less stigmatizing method compared to psychiatric or social work services. This paper delineates the current state of Counselor education in UAE in terms of a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis. Some of the strengths identified are the ever increasing levels of recognition and acceptance of the discipline by the current generation and significant research attempts by professionals. Weaknesses include the socio cultural barriers in reaching out and lack of professional bodies guiding the discipline. Opportunities in the external environment include the social changes in the Emirati society, increasing levels of diversity set in by the forces of globalization and an ensuing need for wellbeing and psychological health. Important among the threats are turf issues with other disciplines and socio cultural barriers preventing the progress of the discipline in the region. At the core of the SWOT analysis is the understanding that counseling in UAE is a discipline which is struggling to establish its identity in the midst of the many internal and external challenges that it faces. Based on the analysis, the paper also presents and recommends certain strategies to advance the discipline in the Middle East region. The imperative for relevant and culturally indigenous conceptualization of counseling to promote the discipline in the region is one among those suggestions.

Keywords: *counselling, United Arab Emirates (UAE)*

Cross cultural validation of the sensation-seeking construct: Development and validation of a new Spanish-language sensation seeking scale

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This cross-cultural study aims to: 1) document the psychometric properties of a new Spanish-language sensation seeking scale, the Escala de Búsqueda de Sensaciones (EBS; (Velez-Pastrana et al., 2009) and 2) study the equivalence of an English-language version of the existing EBS scale. The EBS was developed in 2009 based on the conception of sensation seeking that had been developed by Zuckerman (1994, 2007) and later revised by Arnett (1994), while addressing advantages and limitations of such scales. The 36-item EBS includes a 7-item sexual sensation seeking subscale. Preliminary research indicates that this subscale has .74 reliability and correlates significantly (i.e., .39 to -.25) with sexual risk behavior items, which is comparable to the 11-item Kalichman sexual sensation seeking scale (i.e., Gaither & Sellbom (2003) report correlations of .49 to .18). A total of 300 Puerto Rican and Australian adults complete Spanish/English versions of the EBS. The Puerto Rican participants also complete Arnett's Inventory of Sensation Seeking (AISS; (Arnett, 1994) and Zuckerman's Sensation Seeking Scale V (SSS-V; (Zuckerman, 1994). All participants completed a questionnaire assessing sexual risk behaviours. Concurrent validity will be assessed by correlating the Spanish-language EBS with Arnett's AISS and Zuckerman's SSS-V. A comparison of the factor structure of the Spanish-language EBS with the AISS and SSS-V will explore validity of the sensation-seeking construct as measured by the scale. Spanish and English-language versions of the EBS will be compared to assess equivalency. The psychometric properties of the English EBS will be explored. Results are discussed in the context of previous research on Spanish-language versions of the SSS-V and the AISS (Carretero-Dios & Salinas, 2008; Ferrando & Chico, 2001). These studies had suggested that the two instruments measure essentially the same construct. Clinical and research implications are discussed.

Keywords: *sensation seeking scale, Spanish, psychometric properties*

Cross-cultural assessment of attention level of Israeli and American university students

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The study of attention level and its psychopathological aspects is very extensive, mostly when it is concerned with children and adolescents with Attention Deficit Hyperactivity Disorder (ADHD). Attention is considered more as a psychobiological ability not bound by cultural aspects. Some researchers hypothesized that cultures with consistent attitude toward children may have fewer children with attention difficulties. Others postulated that poor child behavior management in early childhood may be the reason for attention deficit. No clear findings have been found thus far that connect attention level to any specific cultural trait. The present study is a comparison of attention level between first year university students in Israel and first year university students in the United States. Seventy-one first year students in Israel were compared to forty four first year students in the United States with the following two measures of attention: (1) MATH-CPT, a computerized Continuous Performance Test (Lufu, 2006), and (2) d2 Test of Attention, a paper and pencil cancellation test constructed by Brickenkamp in Germany in 1962 and validated again in 1998 by Brickenkamp and Zillmer (Brickenkamp & Zillmer, 1998). The two tests were administered to both populations in a counterbalanced order (half took one test first while the other half took the second test first). The results showed that the American students scored significantly better in the main measure of the MATH-CPT (indicating higher sustained attention level), and in another four main measures of the d2 Test of Attention. The results indicate that first year student in the United States performed better in various measures of attention in both instruments used in the study. These results were unexpected. As attention level is considered as ability influenced a little by cultural aspects. It is possible that differences in temperament between the cultures when people in Middle Eastern cultures tend to be

more impulsive and short tempered or differences in the level of sluggish cognitive tempo (SCT) may explain these results. The author discusses the results and other possible explanations for these unexpected differences.

Keywords: *Attention Deficit Hyperactivity Disorder, attention, cross-cultural assessment*

Cross-cultural moral reasoning about sacred values: East and west, same values but different rationale

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This study examined moral reasoning concerning sacred values in Western and East Asian populations. Responses to a moral dilemma in which a decision was made to spend a considerable amount of money in order to either (a) save the life of one child via an expensive operation or (b) improve hospital resources more generally. These dilemmas were initially framed in the context of the cultural dimension; individualism or collectivism. Expectations were that East Asians, with their more collectivistic mindset, would place higher value on improving hospital resources. Results indicated that East Asians were as outraged as Westerners at the prospect of improving hospital resources rather than on saving the life of one child. The results are interpreted within a universalist approach to moral reasoning with recognition of shared sacred values across cultures and yet emphasizing the different explanatory frameworks used cross culturally to account for the common values.

Keywords: *moral reasoning, individualistic culture, collectivist culture, moral dilemma*

Cross-national investigation of positive youth development

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The study aims to explore the prevalence of adolescent volunteering in three nations. It

examines cultural and contextual factors in a cross-national comparison of volunteering. The study also aims to update our understanding on universal theories of development. The total sample of the study is 4,638 adolescent school students in the age range of 16-17 years drawn from Mumbai, India ($n = 802$) Victoria, Australia ($n = 1929$) and Washington, United States ($n = 1907$). The student survey protocol consisted of a self-report instrument. The International Youth Development Study (IYDS) survey was used in Australia and the United States and the Adolescent Health and Wellbeing questionnaire (AHWQ) was used in India. The study reports on risk and protective factors associated with volunteering and smoking and alcohol behavior that may influence youth volunteering. Meta analysis of data revealed findings relevant to cultural differences. Highest rate of volunteering was reported in Washington State (19.0 percent), lowest in Victoria (6.9 percent) and intermediate in Mumbai (13.6 percent). Females (63.8 percent) were found significantly more likely than males (53.4 percent) to report volunteering. The multivariate logistic regression figures indicate that in Mumbai late adolescents reported less volunteering. Compared to Washington and Victoria smokers and tobacco users in Mumbai reported more volunteering. The study indicates that several protective factors are associated with positive youth development. The findings also suggest that family, school, peer and neighbourhood context are important determinants of positive youth development. Although understanding the development of problematic behaviour has been the focus of much research attention until recently, it is crucial that the factors that promote positive youth behaviour are also understood. Interventions for problematic behaviours no longer simply strive to reduce problem behaviours, they also seek to promote positive behaviours to replace the problematic ones. To ensure that these interventions are appropriate and maximally effective, we need to understand how positive behaviour such as volunteering develops. It is recommended that future research should examine these important differences by using more closely matched survey designs. Examining predictors of youth behaviour in internationally comparative longitudinal studies can establish whether India

can borrow similar population change strategies from other nations.

Keywords: *volunteerism, adolescents, The International Youth Development Study, youth development, cross-national comparison*

Cultural similarities and differences in perceived affordances of situations for big five behaviors

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Consistent with efforts to integrate person and situation approaches, we conducted a cross-cultural study of the perceived "affordance" or conduciveness of situations for behaviors associated with the Big Five traits (i.e., neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness). Drawing on existing theory, we hypothesized that situations will vary in their perceived affordance for Big Five behaviors and that the perceived links between situations and trait-relevant behaviors will be similar across cultures. We also hypothesized that respondents in different cultures will construe situations along similar general dimensions, but that some situations will be construed differently along these dimensions. Using a five-point scale, American ($N = 188$) and Filipino ($N = 215$) college students rated, for each Big Five trait, the likelihood that behaviors associated with that trait (e.g., extraverted behaviors) would be displayed by a person in each of 29 situational contexts. Example situational distinctions included the pleasantness of the situation; the status of interaction partners; various relationship categories and physical settings; intellectual and social demands of the situations; and whether the situations were freely chosen or imposed. As hypothesized, we found greater cultural similarities than differences in the perceived links between situational contexts and Big Five behaviors. Situational effects were large in both cultures in ANOVA results, and in most cases the perceived situation-behavior patterns did not differ significantly across cultures. In addition, in a multidimensional scaling analysis, Americans and Filipinos construed or

differentiated the situations along similar general dimensions (i.e., positive vs. negative situations, challenging vs. easy situations). We also found some meaningful cultural differences that were plausibly attributable to differences in cultural values and practices. Certain features of situations are cultural universals and are perceived to have similar effects on trait-relevant behavior across cultures. The findings contribute to renewed efforts to reconcile person and situation approaches. The finding of similar perceived links between situations and behaviors across cultures also has positive implications for inter-cultural social interactions.

Keywords: *cross-cultural, affordance, big five model of personality, personality, situational contexts*

Cultural variations from the perspective of Hofstede [1991] and House [1994]: A comparative evaluation of the dimensions in 16 countries

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The dimensions of Cultural Variations by Hofstede and those of Robert House have been guiding theoretical and empirical research in the area of Cross Cultural Applied Psychology for the past 15 years and more. There are hardly any empirical investigations that have analyzed the conceptual and empirical overlaps of the dimensions from these two well known and well researched theoretical perspectives. Using the data from over 5000 professional managers and other occupational categories we compare and contrast the overlap of the dimensions in 16 countries. The results are discussed for their future implications in the area of applied psychology. Data were collected from US, Canada, France, Germany, Poland, Australia, Japan, China, India, South Korea, Malaysia, Indonesia, UAE, Chile, Brazil, and Venezuela. The total sample was over 5000 individuals. We compared the empirical overlap from the dimensions for the overall sample and then for each of the countries analyzed separately. The countries were from North and South America, Europe, Australia, and Asia. The results varied according to the clustering of the countries in

terms of regions. The dimension of Individualism and Collectivism had the most overlap from both the theoretical perspectives of Hofstede and House. It seems clear that this dimension is the most fundamental dimension of cultural differences that one should seriously consider in future investigations across national and political boundaries in different geographical locales of the world. We suggest implications of the study for various area of applied psychology including scheduling of tasks, technology transfer, organizational Knowledge Management, and work stress and coping etc. There is no doubt that while there has been an important advance after House broadened the nature of cultural differences, Hofstede Study still should be regarded as a fundamental breakthrough in understanding variability of Cultural Differences in work and organizational settings in different countries of the world and in different continents.

Keywords: *cultural variability, theory, empirical overlaps, applied psychology*

Culture, motivation, and occupational decisions

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The purpose of this investigation was to test a new model of the cultural and motivational perspectives associated with the occupational decision-making processes of senior high school students. A model that was developed by integrating theories from the culture, motivation, and vocational decision-making literatures (i.e. concepts/theories including individualism/collectivism, long term orientation, expectancy-value theory, and the theory of reasoned action) was preliminarily tested by administering a newly developed questionnaire to a sample of 492 Grade 11 students attending a stratified random sample of 6 Independent high schools located in the Sydney metropolitan area (Australia). The questionnaire was subsequently revised, and a refined version of the model was then re-tested using 566 Grade 11 students attending a stratified random sample of 16 government high schools in the Sydney metropolitan area.

Structural equation modeling was used for both phases of analysis. The major findings of the investigation included the development and confirmation (after modifications) of a model of vocational decision-making processes. The model provided empirical support for relationships between cultural orientation, occupation-related values, and attitudes/intentions toward occupations. Two of the main path sequences in the final model suggested that the more students were idiocentric (individualistic) toward the future or allocentric (collectivistic) toward the family, the more they would value occupational interest/enjoyment. In turn, the more students valued occupational interest/enjoyment, the more positive would be the attitudes toward their putative occupations, and the stronger would be their intentions to pursue these occupations. The findings of the investigation may be used by psychologists, career advisors, educators, and families to advise and assist senior high school students faced with the occupational decision. In particular, these groups may need to modify their guidance, and/or understanding of the associated issues, in response to the finding that cultural orientation may be an important consideration. Moreover, reflecting the prominence of occupational interest/enjoyment, they may need to place a greater focus on what occupation-related activities or subject matter are considered the most interesting or enjoyable by senior high school students. From the perspective of marketing, the research may provide occupational and professional groups with valuable marketing information that may be used to attract future candidates. For example, the final model suggested that target groups for marketing campaigns may be classified according to cultural orientation. The investigation may contribute to reducing the gap in the literature on the roles of culture and motivation in the occupational decision-making processes of senior high school students.

Keywords: *occupational decision making, students, motivational influences, cultural influences, interests*

Damaged identities narrative repair: Investigating emotional cycles of

employees undergoing organisational change

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(University of Delhi)

The present paper explores the human side of the contemporary economic reforms through narratives generated in the context of change initiatives introduced by organizations. The focus of the present paper is on the way that individuals understand and make sense of the organizational change and this research examines various emotions experienced by organizational members situated at different levels of hierarchy. The present research is grounded in the qualitative genre of conducting organizational research which is driven by the principle of plural existence of realities. Our understanding of the organization wide processes can be best captured by the stories and narratives generated by employees. In-depth interviews followed by narrative analysis was carried out to decipher the making of the psychological world of the participants. The investigation of the narratives revealed that organizational reality is rooted in the interpretive framework, which is locally constructed and defined rather than existing as an independent or objective entity. As indicative by the data, an organization played a vital role in the self-images of the employees dependent on their levels of congruence with the organizational reality. The paper is organized around various emotional themes related to constitution of personal and professional identities. It is asserted through this paper that in the evolution of the management thought, the identity of an employee as a conscious being needs to be recognized and attended to by the organization. Narrative analysis offers a coherent framework to integrate the 'fragmented' identities of the individuals amidst the change process. Change cannot be treated as a linear shift from one modus operandi to the another rather the present research suggests that understanding the emotions that are generated during the process of change play a pivotal role in making any change initiative a success or failure.

Keywords: *organisational change, emotions, narrative analysis, identity, self-images*

Dealing with disasters: Impact of occupational stress in journalists' well-being

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Recent studies have considered journalists as first responders as well as policemen, firemen and health personal (Osofsky, Holloway & Pickett, 2005; Law, 2007). This inclusion is due to the fact that journalists are exposed to the same stressors as the emergency professionals and so they can exhibit the same emotional answers and vulnerability levels. There are still very few studies regarding occupational stress of journalists, either on potentially traumatic situations (as war conflicts and natural disasters) or on their daily work. The main focus has been on distress and pathological coping strategies associated. The main goal of this study is to provide a better understanding of the stress process of journalists to better help them dealing with occupational stressors. According to the Holistic Model of Nelson and Simmons (2002), in order to also analyze the positive experiences of stress, savoring strategies and positive outcomes after being in a disaster scenario, we interviewed 25 Portuguese journalists from television, radio and newspapers. All the journalists have more than 15 years of experience and are well renowned in the media field. Following it, we started the application of a set of questionnaires in order to gather information from as many journalists as possible. There is more positive stress than distress among journalists in disaster fields. They perceive their daily work with higher distress. Natural disasters cause higher emotional impact than war conflicts. In their opinion there seems to be some evidence for post traumatic stress disorder (PTSD) signs but also for PTSD growth among journalists that work in disasters. Psychological support after distressing experiences is seen by these journalists as a useful and needed tool to overcome the possible downsides of that same experience. We will be presenting some cues for therapeutic intervention that promote occupational the well-being of journalists (in order to prevent distress and promote positive emotional experiences).

Keywords: *journalists, occupational stress, psychological support*

Decision making strategies and self-regulation of driving behavior

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Driving performance is thought to be guided by satisficing decision making strategies. This refers to not striving for the optimum level of performance but being satisfied with the good enough performance. Less is known about whether there are conditions under which drivers would try to reach an optimal performance level and self-regulate to reach their goals in accordance with a performance feedback. The aim of the current study was to investigate decision making process behind self-regulation of driving behavior. We used eco-driving task and fuel saving as a goal. We hypothesized that drivers would aim an optimal performance level when told to drive environmentally friendly and to save fuel; however, this would not be the case if drivers were under time pressure. Driving performance was measured in a driver simulator. We created six different situations that would require participants to accelerate and decelerate but leave room for different patterns of acceleration and deceleration. We had two experimental groups: one with time pressure manipulation and one without. We recorded drivers' behavior and later on we had interviews with the participants asking detailed description of their behaviors and decision making process. Participants were forty university students who had a valid driver's license at least for one year and had at least two thousand km of annual mileage. Initial results revealed that participants in the time pressure and no time pressure groups showed different patterns of acceleration and deceleration both in terms of gas and brake use and slow-down & speed-up distances. Moreover, interviews revealed different thinking patterns for two groups. Additionally, participants in the no time pressure condition were more likely to take into account the fuel consumption feedback in choosing their behaviors. Data collection is still in progress. Drivers' self-regulation and reliance on performance feedback were guided by different decision making strategies under different

conditions. Drivers showed more optimizing strategies when they were not under time pressure.

Keywords: *driving performance, decision making, eco-driving, driver simulator*

Delayed reentrant processing impairs visual awareness: an object substitution masking study

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In object substitution masking (OSM) a sparse, common-onset mask impairs conscious target perception if it temporally trails the target and spatial attention is dispersed. Di Lollo et al.'s (2000) Reentrant Processing Model explains OSM as reflecting the interaction of feed-forward and feed-back processes in the brain. Specifically, upon presentation of a target and mask a coarsely coded representation of both stimuli progresses from V1 to anterior brain regions (feed-forward sweep). Due to the low resolution of this information feedback/reentrant processing is employed to confirm the identity of the visual stimulation. According to this model, dispersing spatial attention delays feed-forward processing, increasing the likelihood that only the mask remains visible once reentrant processing is initiated. Therefore, the mask will substitute the target in consciousness. Notably, the Reentrant Processing framework predicts that OSM will be elicited when either feed-forward or feed-back processing is delayed/impaired as both will increase the probability that only the mask remains visible once reentrant analysis begins. Thus, it should be possible to observe OSM for spatially attended stimuli if feed-back processing from anterior regions is delayed. We presented subjects with a standard OSM paradigm (Landolt C target, four-dot mask) while they performed a difficult arithmetic task known to engage brain areas involved in reentrant processing (prefrontal and parietal cortex). All stimuli appeared in the same spatial location and, employing a standard dual-task protocol, the arithmetic and OSM tasks had either a short (100ms) or long (800ms) stimulus onset

asynchrony (SOA). Increased OSM was observed at the short relative to the long SOA and this was more pronounced when subjects performed, rather than ignored, the arithmetic task. The results support a key prediction of Di Lollo et al.'s Reentrant Processing Model: if feedback processing is delayed then OSM can be observed for spatially attended objects.

Keywords: *object substitution masking, reentrant processing model, feedback, visual awareness*

Deliberate practice, feedback and learning of complex tasks

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Deliberate practice is considered the single most important determinant of the development of deep knowledge that leads to expert performance e.g. Ericsson, Krampe & Tesch-Romer, 1993. However, this conclusion is based on retrospective analyses and is yet to be examined experimentally especially during the early phases of knowledge development. Deliberate practice theory also identifies feedback as a means of developing deep knowledge, but the relationships between deliberate practice and feedback remains unexplored. We tested the hypothesis that deliberate practice plus high feedback specificity would lead to the best learning outcomes using a complex computer-based management simulation. A 2 (high/low feedback specificity) x 2 (high/no deliberate practice) x 12 (practice and transfer trials) between-and-within-subjects experimental design ($n=117$) included an initial practice phase and a transfer phase conducted five days later. As predicted, deliberate practice improved both practice and transfer performance, and the improvement was greater under high rather than the low feedback specificity. The effects on transfer performance remained significant after controlling for individual differences in fluid intelligence, positive affect, negative affect and self-efficacy; and were partially mediated by practice performance. Contrary to the findings of Goodman and Wood's research program on feedback specificity and transfer of training (e.g.,

Goodman & Wood, 2009), we found high compared to low feedback specificity resulted in better transfer performance, however this main effect was no longer significant when the interaction term (deliberate practice x feedback specificity) and individual differences were included in the hierarchical regression models. Findings show that deliberate practice is highly beneficial for learning of a novel complex task, and that the high guidance of specific feedback facilitates learning when accompanied by the conscious processing required by deliberate practice. Implications for the design of effective training interventions include building in practice sessions to develop the metacognitive skills required for deliberate practice, and for trainers to balance specific feedback and other forms of guidance with opportunities for deliberate practice.

Keywords: *deliberate practice, feedback, learning, complex tasks, expert performance*

Demographic differences and students' preferential helper

SETIAWAN, J. L. (Universitas Ciputra)

Students experience various concerns during their time in the university. Numerous studies have been carried out to examine students' preferred helpers. The aim of this study was to investigate whether there are differences on preferential helpers among students with different gender, ethnic backgrounds, modes of living and years of study. A questionnaire consisting of 14 areas of concern and 14 choices of helpers was distributed to 1,279 students. Respondents were asked to imagine themselves to experience serious problem relating to the area presented in each item of questionnaire and to choose one of the 14 choices of sources of help. The study found that there were high positive correlations of chosen sources of help between the groups with different gender, ethnic backgrounds, modes of living and years of study. Friends, self-help, and mothers were the popular choices in any groups. The percentage for Self was significantly higher in males than females. The percentages for Father and Brother tended to be higher in male students than in female students, whereas the percentages for

Mother and Sister were significantly higher in females than males. The percentages for family members were significantly higher in students living with their family than in those living outside the family. The percentages for helpers outside family members were higher in students living outside the family than in those living with their family. Students from different gender, ethnic backgrounds, modes of living, and years of study showed no important differences in the preferential sources of help. Friends and mothers are the most preferred sources of help, apart from self-reliance. There is a universality of human experience that people are more likely to seek help from close relations. This confirms the help-seeking theory proposed by Margaret Clark (1983).

Keywords: *students, university, preferential helpers, gender, ethnic backgrounds*

Depression, anxiety and quality of life (QoL) among HIV and AIDS patients attending a public health clinic in South Africa

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LOONAT, N. (University of the Western Cape),
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To ascertain baseline measures of depression, anxiety and quality of Life (QoL) as mental health indicators of individuals infected with the HI virus and receiving health care within the public health sector in a disadvantaged area in the Western Cape Province in South Africa (SA). This study used a quantitative research design and was cross-sectional in nature. A purposive sample was recruited from a single public health clinic and comprised 70 male and female adult participants with a male to female ratio of 3:7, a mean age of 31 years ($SD = 8.7$). The participants were either on anti-retroviral (ARVs) treatment or being prepared for ARVs. Self-report questionnaires which included the Beck Depression Inventory (BDI II), Hospital Anxiety and Depression Scale (HADS) and the Quality of Life Satisfaction and Enjoyment Questionnaire (Q-LES-Q) were administered. The prevalence of depression and anxiety were found to be 36.8% and 28.6% respectively. On the Q-LES-Q the general (overall QoL), feelings,

school/coursework, and social relations measures were above average (58.4%, 52.7%, 59.4%, and 59.4% respectively) as compared to the physical, house-duties and work measures which were below average (48.6%, 45.8%, and 10.3% respectively). It was concluded that young adults, especially females, were found to be the most vulnerable to HIV infection, the prevalence of depression and anxiety was extremely high as compared to national and international rates in the general population, and while the general QoL was found to be average, the physical and work domains were not satisfactory. This study, therefore, highlights the importance of assessing the mental health aspects of HIV/AIDS. The most important recommendation that will be made to the relevant health authority is to develop a health management plan for HIV infected patients that is holistic and includes the biological, pharmacological and psychological/social treatment components.

Keywords: *quality of Life, HIV, South Africa, depression, anxiety*

Determinants of car users' switching to public transport

ERIKSSON, L. (Karlstad University)

The general aim of the present paper was to investigate the determinants of car users' switching to public transport when driving to work. Since the quality of services is particularly low in medium-sized cities, making the car a much more attractive option, the focus is on car-use in such cities. A combination of web-based survey and experimental simulation was used. The participants were given the task of planning their travel to and from work, including the performing of additional activities according to predetermined agendas. Four agendas varying in their number of additional activities were compared. The participants were randomly assigned to four groups of approximately the same size (high vs. low car costs and good vs. bad access to bus stops). The main results were that shorter travel times and good access to bus stops led to greater bus use while constraints imposed by a busy daily agenda led to greater car-use, in particular if car costs were low. The conclusions of this paper are that a public

transport system must appear attractive, not only to its present users, but also to prospective users who currently use their cars. To appear attractive, it must not be too expensive and must have timetables and routes that allow users to travel in an efficient manner. One measure that can be used to force commuters out of their cars is higher car-use costs; however, car-use costs may need to be substantially higher than the cost of using public transport in order to be effective. As indicated, the perceived difficulty of using public transport is also an important factor. Raising car-use costs will thus be insufficient unless changes are made to public transport services. A factor complicating this is activity patterns, which are often complex. As has been indicated in the present research, the more complex the activity pattern - the more the car is used as a means of transport.

Keywords: *car use, public transport*

Developing tools to facilitate personal reflection in the journey to achieve personal development

SETIAWAN, J. L. (Universitas Ciputra)

The degree of helpfulness found in the counseling process is largely influenced by the person of the counselor (Cormier and Hackney, 1987). The personal quality of helpers is more essential than their specific skills or knowledge. The essential requirement for an effective helper is awareness. Arguably, counseling courses should not only equip students with academic knowledge and counseling skills, but also help students be aware of themselves in order to achieve personal growth (Setiawan, 2010). The aims of this study is to elaborate and evaluate teaching methods or assignments in Counseling Psychology course in the efforts to assist students in the personal reflection journey in order to achieve higher self-awareness and better personal quality. Qualitative approach was chosen as the research method. Focus group discussion and open ended questionnaire were chosen as the data collection tools. A total of 30 students participated in the focus group discussions (FGD-s) and 14 students volunteered in filling in the open ended questionnaire. The participants were undergraduate students in

Psychology who just completed the counseling course. Results showed that participants benefitted from personal reflection assignment. However, they lacked of experience in conducting personal reflection, so that personal reflection should be facilitated by some tools to make the reflection processes more focused. Workbook to be completed by students and buddy sharing were regarded as helpful tools. The use of self-assessment tools or workbook with clear structure to be completed by students is strongly recommended as this will facilitate reflection processes. The method of group sharing or buddy sharing is also suggested as buddy sharing contains conducive climate to help an individual develop and accommodate the need of objectivity and accuracy to reach better self-awareness.

Keywords: *counselling, effective helper, awareness, counseling psychology, personal reflection*

Development and testing of an instrument to measure the concept of human resources strength

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The current research presents a set of studies in order to develop a new instrument to measure the meta-attributes as proposed by Bowen and Ostroff (2004) in their model of human resource strength. Human resource (HR) strength is the degree to which the HR function is capable of conveying a common set of messages regarding the HR function. The research is composed of two studies. In the first study, a first pool of items was created, following psychometric theory (e.g. Nunnally & Bernstein, 1996). This pool of items was next submitted to expert scrutiny (including academic fellows and HR practitioners), which lead to item purification and selection. A final pool of items was translated into meaningful sentences. A first application in five companies ($n= 91$ cases), and a second application, with a larger number of items, in two companies ($n= 198$) allowed to refine, select, and generally improve the initial pool of items. The analysis included common techniques, such as reliability, exploratory and

confirmatory factors analysis, as well as less popular techniques, such as the Rasch model for item analysis. The second study was carried out in a large multinational company within the hospitality industry, and was based on 511 questionnaires. Confirmatory factor analysis, amongst other techniques, was used to test the empirical structure of the data. Although results from the first study suggested that the theoretical proposals by Bowen and Ostroff (2004) were not entirely met, results from the second study showed a considerable improvement, both in terms of reliability and validity. All the nine constructs initially proposed by the authors (visibility, understandability, consistent HR messages, relevance, legitimacy of authority, instrumentality, validity, agreement among principal message senders, and fairness of the HR system) were supported by the data, although some of the dimensions revealed better results than others. Despite the theoretical interest of Bowen and Ostroff's (2004) proposals, few studies have looked at ways to measure the key constructs in their model. The current investigation presents interesting results, which are compared to other works in the field, such as Sanders, Dorenbosch and Reuver (2008), and Delmotte, Gilbert and Winne (2010). Key results include the confirmation of Kelley's (1973) model of attribution theory, in which Bowen and Ostroff (2004) based their nine new constructs.

Keywords: *human resources, psychometric instrument, reliability*

Development and validation of a Chinese worldview scale

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The aim of the study was to develop and validate scales to measure major worldviews present in Chinese populations, and to investigate the association between those worldviews and environmental attitudes and behavior. Worldviews were defined in terms of beliefs: a worldview is a set of beliefs that provides a metaphysical account of what the world is like, how the sources of meaning can be found, and

which provides, on the basis of these, general guidance for most of a person's attitudes and actions. By means of literature review and expert consultation, it was determined that four major worldviews were likely to be present in all Chinese populations: monotheism (Christianity, Islam), Confucianism, Buddhism, and Daoism. By submitting provisional lists of conceptually significant items to a selection of philosophers and psychologists, a final set of survey questions was developed amounting to 46 items. Together with a number of other scales, measuring anthropocentrism, ecocentrism, ecologically conscious consumer behavior, endorsement of environmental policy, the 46 items representing the aforementioned worldviews were administered to 430 Hong Kong Chinese with 341 valid responses. A principal component analysis with Varimax rotation and Kaiser normalization was run and two factors were extracted which explained 35% of the variance of the 46 worldview items. Nine items pertaining to monotheism loaded onto the first factor, while 15 items associated with Buddhism, Daoism and Confucianism loaded onto the second factor. The former was labeled *Monotheism* and the latter *Chinese Worldview*. The result of a confirmatory factor analysis provided support to the validity of this two-factor structure: RMSEA = 0.06, NNFI = .92, CFI = .92. The impact of the two worldviews on attitudinal and behavioral variables was tested using path analysis. Results showed that *Monotheism* and *Chinese Worldview* exert their effects on pro-environmental behaviors mainly via ecocentrism. In particular, lower *Monotheism* and higher *Chinese Worldview* was associated with higher ecocentrism which in turn predicted pro-environmental behavior and endorsement of pro-environmental policies. Results of the present study provided preliminary support to the structure of worldviews present in the Chinese people and how these worldviews are related to environmental attitudes and behaviors. We demonstrated clearly that worldviews are theoretically important antecedents to pro-environmental attitudes which have been reported repeatedly in the West to be predictive of environmentally relevant behaviors. However, as present findings were generated from a sample Hong Kong Chinese, further research is warranted to demonstrate the generality of the construct of

Chinese worldviews and their behavioral consequences in different contexts or Chinese populations.

Keywords: *Chinese worldviews, environmental attitudes, beliefs*

Development and validation of the alliance psychological contract (APC) model and instrument

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The aim of the present study was to describe the development and validation of a new instrument - the APC (Alliance Psychological Contract) Questionnaire, which is designed to measure and diagnose the health of relationships, and predict performance outcomes, in project alliances. A sequential mix method design (qualitative/quantitative) approach was utilized. Semi-structured interviews were conducted with 24 industry experts performing different roles in various industries across Australia, the purpose being to validate the APC model and corresponding constructs, which are based on Guest's (1998) model of the psychological contract (PC). NVivo 8 qualitative analysis package was used to store, manage, code and analyze the data. A hybrid content analysis approach (inductive and deductive) was used. Next, a pilot was conducted in order to develop the psychometric properties of the APC questionnaire, using a sample of 16 Australian project alliances and including a total of 400 individual responses. The APC questionnaire appears to have acceptable psychometric properties and some predictive power regarding performance. Feedback from participating alliances indicates the application of the model and survey results as useful to industry. The APC model and associated instrument provide the means to reliably measure and diagnose the health of alliance relationships, and predict performance outcomes.

Keywords: *validation, alliance psychological contract questionnaire, relationships, performance outcomes*

Development of an admission test for a newly-established university: the case of Pelita Harapan University in Surabaya, Indonesia

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The aim of the paper is to develop a valid and reliable admission test that can be used to select students who are seeking admission to Pelita Harapan University in Surabaya (UPHS). Specifically, the study will undertake item analysis that will be used to generate information about the quality of each item based on psychometric properties. Secondly, the results will be used to determine the reliability of UPHS admission test itself. The UPHS admission test was designed for three subjects, namely mathematics, physics, and general knowledge. Each subject consisted of several components. Lecturers from the different departments were identified to generate 100 items for each of the subjects so that the content validity could be achieved. The test was a multiple-choice type with five choices of possible answers. The items were administered to 315 senior high school students in Surabaya. Item analysis was conducted based on item discrimination, item difficulty and distracter effectiveness. The selected items must have an index of item difficulty from 0.2 to 0.7 and an index of item discrimination \geq 0.2. All of the distracters for each item were selected by the respondents. Since each subject consisted of several components, the selection of the items also considered the proportion of the components as written on the initial blue-print. Thereafter, the reliability was conducted based on selected test items. The study was able to select 50 items for each of the three subjects. Each item in the UPHS admission test was assessed based on psychometric properties. The reliability ranged from 0.764 to 0.877. Results showed that the UPHS admission test is reliable. Thus, it can be used to select students who are seeking admission to the newly-established university. A valid and reliable admission test can be used to select students who are seeking admission to Pelita Harapan University in Surabaya (UPHS). Items that met the selection criteria were selected as admission test questions. Subsequent assessments, however, must be conducted as the UPHS admission test is

used. This will ensure its reliability in the long-run.

Keywords: *admission test, psychometric properties, reliability, validity*

Development of the gender harassment scale

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In Japan, workers are treated differently according to their gender in the workplace, whereby men are perceived as having important roles while women are perceived as having subordinate positions by their supervisors or coworkers in their organizations regardless of their abilities. In this study, we define Gender Harassment as behaviors which treat workers according to their gender in organizations. Our focus was on gender harassment behaviors toward women. A scale for measuring gender harassment of women by men, as well as by other women at Japanese workplaces was developed. First, items related to gender harassment were generated through semi-structured interviews. And these items classified into two categories. Second, a questionnaire containing these items was administered to a sample of working Japanese males and females ($n=354$; 132 female, 222 male). Factor analysis was conducted on the responses to the questionnaire. Results indicated that gender harassment had the same two-factor structure in both sexes. The first factor consisted of items where women were not expected to do something; the second factor was constructed of items expecting women to do something. The former was named "omission" ($\alpha=.845$); the latter was named "commission" ($\alpha=.848$). To test of validity of the two-factor structure of gender harassment, we examined the relevance of the egalitarian sex role attitude, gender conception, and old-fashioned sexism. There were moderate correlations for each of them. Then, the relationship between gender harassment and sexual harassment on workplace incivilities, such as general forms of mistreatment was analyzed in the sample of men. Results suggested that gender harassment was linked to sexual

harassment; however, it is possible that the two concepts are different, at least in Japan. We discussed that these findings in two facets of gender harassment at Japanese organizations.

Keywords: *gender harassment scale, discrimination, women, Japan, egalitarian sex role attitude*

Developmental deficits in executive functions in children and adolescents with Asperger's syndrome

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This paper reports findings of a study of executive functions in children and adolescents with Asperger's Syndrome in relation to mental age. A neuropsychological model of the characteristic deficits in Asperger's Syndrome as expressing executive dysfunction has been influential in driving research. Challenges for investigations of this model include the prolonged developmental trajectory of executive control by comparison with other cognitive abilities and the relationship of test performance to real-life functioning. Reports of deficits on traditional measures of executive function in Asperger's Syndrome are inconsistent, in contrast to autism, with differences between clinical groups often reflecting differences in mental age. 30 participants with Asperger's Syndrome (AS) (mean age = 10 years, range = 6-15 years; mean FSIQ 98, VIQ 99) were compared with 30 nonclinical participants matched on age, gender, Full Scale and Verbal IQ. Three indices of executive function (EF) - planning (Tower of London; TOL), cognitive flexibility (Wisconsin Card Sorting Test, WCST - Perseverative Errors), and problem solving (WCST - Non-perseverative Errors) were employed. Within-groups analyses identified EF deficits operationalized as significant deviations from predicted EF scores for mental age as derived from the nonclinical group. Parent reports of daily living skills on the Vineland Adaptive Behaviour Scales (VABS) provided a measure of real-life adaptive functioning separate from diagnostic criteria for Asperger's Syndrome. 85% of AS participants scored significantly below mental age prediction on one or more of the three EF indices. Type of

EF deficit varied according to mental age, IQ profile, and severity of autistic-type maladaptive behaviours. 15% (4) of AS participants without deficits on EF indices showed significantly impaired daily living skills as did all AS participants. Findings supported an executive dysfunction model of Asperger's Syndrome. Deficits in real-life adaptive behaviours were universal within the Asperger's Syndrome group, including the four Aspergers participants with non-deficient scores on the three EF indices. Findings that the type of EF deficit differs according to developmental level would be consistent with failure to develop executive abilities in tandem with development of other cognitive abilities in Asperger's Syndrome.

Keywords: *executive function, Asperger's syndrome, mental age, test performance*

Difference between membership and pride in group identity: A multilevel view

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Some recent group identity studies have taken on a multilevel perspective since the Interactive Model of Social Identity Formation (Postmes et al., 2006) was proposed. Treating group identity as multilevel would enable us to capture a situation within a group and members' affect and behaviors brought by the enhancement of group identity within the whole group. Hence, this approach was expected to bring a new trend in group studies. However, there has not been consensus on the operational definition of group level group identity as of yet. In addition, group identity has remained uncertain at the group level. The aims of this study were to (1) compare two operational definitions by Swaab et al. (2008) and Ozeki & Yoshida (2009); (2) to identify the difference of two subscales of group identity, Membership and Pride, in both individual and group level, and (3) to signify Membership and Pride in group level using Multilevel Covariance structural Analysis. A total of 358 university students (161 Male, 190 female, 7 unidentified) evaluated their group identity with the department of their major and its group entity and ingroup value (Leach et al., 2008). They also answered how much they

thought students of their department shared a group identity with the department of their major, which was operational defined by Swaab et al. (2008). At the group level, Membership led to shared group identity mediating group entity. However, at the individual level, people with high Membership perceived that their ingroup was cohesive, and its members shared group identity tightly. At the individual level, perceived ingroup value predicted Pride leading to Membership. In group level, Pride was affected by ingroup value. Membership at the group level was considered to be an indicator of cohesiveness, and Pride in group level might reflect ingroup value. The result suggested that enhancement of Membership within the whole group (Membership at the group level) might be a source of 'groupiness' which made its members share group identity. The most interesting finding of this study was that the process of the group becoming cohesive seemed to be different from members' perception of cohesiveness.

Keywords: *group identity, members, pride*

Differences in career choice development: General versus technical education

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Vocational and technical education receives increasing attention worldwide. It is acknowledged more and more that these students follow a special track and show an own identity. Also, the career choice development profile is an issue. Is their profile specific and different from that of students in other educational tracks? A five-year longitudinal follow-up study in Flanders followed a cohort of 2,619 students (1,768 general education, 851 technical education) from the start of grade 9 till the end of the 1st year in HE. These students completed the Career Choice Development Questionnaire at the beginning and end of each school year. The scores were calculated on six career activities: sensitization (ST), exploration self (ES), exploration environment (EE), exploration relation self-environment (ER), specification (SP) and decision (DE). The

development and differences in development between general and technical education students were analyzed via mixed models; t-test for paired samples and t-tests for independent samples. The scores for the six career activities increase in general between grade 9 and the end of grade 12. At the start of grade 9, technical education students score higher on ES, EE, SP and DE. At the end of secondary education, students from general education reach a significantly higher career development profile. The career development profile of general education students increases much more sharply than the profile of technical education students from the end of the penultimate year onwards. The way general and technical education students evolve to the career development profile at the end of secondary education differs significantly. The career development profile increases at moments of crucial career decisions and when professional career interventions are made available. The higher score of technical education students in grade 9 can be related to the early confrontation with the actual work environment. This confrontation is inherent to their schooling. The sharper increase among general education students' towards the end of secondary education connects to more intensive career interventions than those made available in technical education.

Keywords: *education, career choice, students, technical education*

Differences in risk perception, priorities, worry and demand for risk mitigation in transport among Norwegians in 2004 and 2008

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This study aimed to investigate differences in risk perception, the demand for risk mitigation, priorities and worry related to transport between the Norwegian public in 2004 and 2008. Age, gender, education, driver licence and number of injuries in transport were controlled for. The comparisons were carried out with questionnaire surveys consisting of validated measurement instruments among randomised

representative samples of the Norwegian public in 2004 ($n = 1730$) and 2008 ($n = 1864$). Both samples were obtained through the Norwegian population registry. Multivariate analysis of variance (MANOVA) showed that the perceived probabilities of transport accidents decreased, whereas the perceived severity of consequences increased during this period. Both samples estimated higher probabilities of accidents by private means of transport. The demand for risk mitigation and priorities related to transport safety increased significantly in the same period. The 2008 sample also reported more worry regarding accidents by private transport. Gender, age and education exerted individual main effects on the dependent measures. Due to investments in road infrastructure and safety campaigns probabilities of transport accidents have been reduced in Norway the last four years. The probability estimates by Norwegians in 2008 are fairly congruent with objective risk estimates. Safety campaigns which have focused upon the affective component of transport accidents have been intensified in the same period. This could be attributed to the higher ratings of the severity of consequences, worry, demand for mitigation and safety priorities among the public in 2008.

Keywords: *risk perception, risk mitigation, transport, Norwegians*

Different factors influencing driving limitation in young-old and old-old drivers

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Driving limitations and subsequent cessation have much effect on the life and well-being of older people because of a reduction in mobility. The present study aims to identify the factors predicting driving limitations among the young-old (aged 69 - 74 years, $n = 175$) and the old-old (aged 75 - 87 years, $n = 152$). Active Japanese older drivers, who attended driving schools to take part in the Older Driver Program for license renewal, participated in the study. They completed a questionnaire about demographics (age, sex), traffic offence/accident in the last 3 years, anxiety while driving, necessity of driving, subjectively perceived oldness, and driving

limitations. Driving behaviour was also evaluated by an in-car observation. Multiple regression analyses were conducted with each of the driving limitation variables (i.e. driving frequency, compensatory driving, and intention to stop driving) as the dependent variable because of small correlations between them, from $r = .08$ to $.13$. The analysis revealed that age, sex, perceived oldness, necessity of driving had significant influences on 2 or 3 driving limitation variables. However, the explanatory variables that significantly predicted driving limitations differed between young-old and old-old drivers when they were analyzed separately. Only drivers with a history of traffic offence/accident were more likely to report driving limitations for the old-old group. Old-old drivers exhibited more compensatory driving and showed stronger intention to stop driving than young-old drivers. The two groups, however, did not differ significantly in driving frequency and in the explanatory variables except driving behaviour after controlling for sex. The results support that older drivers adjust their driving in response to their increasing age and necessity of driving. Yet, some of the old-old drivers are more likely to continue to drive actively in spite of their declining ability and smaller necessity of driving, and some of them are more likely to limit driving while still fit to drive and need to drive. This suggests that other reasons such as cognitive impairment and low income may play a role in driving limitation among the old-old.

Keywords: *age, drivers, reduced mobility, driving limitations, driving behaviour*

Dimensionality of DSM-IV borderline personality disorder in Chinese psychiatric patients: a confirmatory factor analysis

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Empirical efforts over the past decade have established its reliability and validity of the construct of borderline Personality Disorder (BPD) in the West. The Chinese Classification of

Mental Disorders (CCMD-III), however, raised doubt about the construct validity of BPD in the Chinese culture. The objective of this study was to examine the construct validity of the DSM-IV criteria for BPD among Chinese psychiatric patients. A total of 1419 Chinese adult psychiatric patients aged between 18 and 45 years old completed the Chinese Personality Disorder Inventory (CPDI) (Leung, 2004) and the Chinese Personality Assessment Inventory-2 (CPAI-2) (Cheung et al., 2003). We selected two highly relevant items from the two measurements to assess each of the BPD diagnostic criteria. Endorsement on both items will be considered as meeting a specific simulated BPD criterion. A confirmatory factor analysis (CFA) was then performed on the set of simulated diagnostic criteria to test (a) a unitary construct and three earlier-reported multidimensional models that included: (b) Sanislow et al.'s (2002) three-factor model; (c) Lieb et al.'s (2004) four-factor model; and (d) Leung and Leung's (2009) four-factor model. Measurement invariance of BPD criteria across gender and age group was also assessed. DSM-IV BPD criteria set as assessed by the simulated diagnostic method demonstrated good internal consistency ($\alpha=.81$). Although results of CFA suggested good fit for all the tested models, the latent structure of BPD was best represented by Leung and Leung's (2009) four-factor model measuring correlated dimensions of affective dysregulation, impulsivity, self-disturbances, and interpersonal disturbances (NFI=.96, NNFI=.95, CFI=.97, RMSEA=.06). This model also demonstrated gender equivalence of the BPD construct, but not age group equivalence. BPD is a reliable and valid construct among Chinese psychiatric patients. However, future investigation on factorial equivalence of BPD construct across age groups is warranted.

Keywords: *borderline personality disorder, Chinese psychiatric patients, construct validity, confirmatory factor analysis*

Direct, indirect and interactive effects of self-control demands and emotional dissonance on indicators of strain and absence behaviour

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Recently, self-control demands at work (SCD; demands on inhibiting spontaneous, impulsive response tendencies and associated emotions becoming manifest in huffiness or injudicious expressions) have been introduced as a source of stress predicting job strain. In explaining the adverse effects of SCD, we hypothesized that emotional dissonance (ED; perceived discrepancy between genuinely felt emotions and emotions required by the job role) mediates the relationship between SCD and job strain (hypothesis I). Moreover, as ED and SCD are assumed to draw on the same limited regulatory resource both variables were expected to interact in a predicting strain, such that ED and SCD mutually amplify each other in their adverse effects (hypothesis II). Emotional exhaustion, depersonalization, anxiety and one absence measure were introduced as outcomes. Our study draws on two German samples. The first sample consisted of 326 service employees of a health-insurance company, while participants of the second sample were recruited from a civil service institution ($N = 324$). Absence frequency of the 12 months following the survey was available (second sample). In order to test both hypotheses, structural equation analyses were conducted. In both samples, bootstrapping revealed significant mediator effects of ED in the relationship between SCD and burnout. The effect of SCD on anxiety was also fully mediated by ED in the second sample (hypothesis I). Finally, interaction effects between ED and SCD were found such that the relationships between one predictor and all outcomes (including absence behaviour) were amplified as a function of the other predictor (Hypothesis II). The mediator effect of ED is consistent with the argument that emotional job demands will only lead to job strain, if ED is experienced. The interaction effects are in line with the notion that ED and SCD trigger different self-control processes which consume a common limited resource capacity.

Keywords: *self-control demands, emotional dissonance, job stress, absenteeism*

Discursive positioning during heated intergroup encounters: Contesting the social meaning of a peace agreement

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This paper used positioning theory to analyze the heated intergroup conflict over the failed 2008 peace agreement between the Government of the Republic of the Philippines (GRP) and the Moro Islamic Liberation Front (MILF). Data sources consisted of 220 news articles extracted from national and local newspapers, and the website of the MILF (Luwaran). Groups like the President's Office, the government peace panel, local governments, the political opposition and the MILF are discursively positioned as each collectively unfurls their own storyline in a volatile political landscape. The findings from this research are presented in three parts. First, we look at the different storylines that were constructed and contested by the various stakeholders across analytical layers and across time periods. Second, we present the major positions that were taken up and negotiated by the key actors in this issue. Finally, the shifts in positioning patterns across time periods among the different stakeholders are illustrated through a positioning matrix. Results demonstrate the importance of detecting intergroup conversation patterns and shifts surrounding contentious peace agreements over long-standing protracted social conflicts.

Keywords: intergroup conflict, peace agreement, political landscape, social meaning, stakeholders

Discussing women's self-views and body images in intimate relationships: A role for verification or enhancement processes?

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This research consisted of two parts examining whether Self-Verification theory (Swann, 1987), or Self-Enhancement theory (Murray, Holmes, & Griffin, 1996), best characterised actual interactions between intimate partners over

women's specific positive and negative self-views (Part 1), and women's body images (Part 2). The study aimed to determine: (1) how women presented, and how men responded to, women's self-views; (2) women's feedback desires; and (3) whether women attempted to bring men's views into alignment with their own self-views. 43 opposite-sex couples (72% had been in their relationship for more than two years) aged 18-62 from rural and urban Victoria, completed measures of self-views, body image dissatisfaction, relationship satisfaction and relationship intimacy. They were videotaped engaging in three counterbalanced four-minute interactions over women's positive self-views, negative self-views, and body images, respectively. The recordings of these interactions were subsequently coded for verification and enhancement processes by objective raters. Women's and men's perceptions of the interactions were assessed using self-report questionnaires. Results demonstrated that verification processes characterised interactions over women's positive and negative self-views, but enhancement processes characterised interactions over women's body images. For both positive and negative self-views, women presented themselves in a self-verifying manner, desiring and receiving consistent feedback. Women attempted to bring their partners' views into alignment with their own self-views. Verification effects were stronger for the positive than negative self-views (Part 1). Body image dissatisfied women, although providing self-verifying presentations, desired and received self-enhancing positive feedback, and did not attempt to change their partners' views (Part 2). Objective ratings and self-reports were consistent. The findings of Part 1 validate Self-Verification theory, indicating that it applies to actual interactions of intimates over women's specific self-views, and may explain how such self-views are shaped and maintained. Self-enhancement processes were found to be more characteristic of couple's interactions over women's body images in Part 2, indicating that self-verification processes may not explain the maintenance of women's body image dissatisfaction. Body image may have special status as a self-view requiring enhancement due to being: (1) a socially scrutinised construct; (2) highly relationship relevant; and (3) related to

global self-worth. Implications for psychological interventions are discussed.

Keywords: *self-verification theory, self-enhancement theory, women's self-views, body image, intimate relationships*

Dispositional hope to predict resilience after hereditary colorectal cancer genetic testing: a prospective outcome trajectories study

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Genetic testing for hereditary colorectal cancer (HCRC) had significant psychological consequences for test recipients. This prospective longitudinal study aimed at investigating factors predicting psychological resilience in adults undergoing genetic testing for HCRC. A longitudinal study was carried out on Hong Kong Chinese HCRC family members recruited and offered genetic testing by the Hereditary Gastrointestinal Cancer Registry to determine psychological outcome after genetic testing. Self-completed questionnaires were administered immediately before (pre-disclosure baseline) as well as 2 weeks, 4 months and 1 year after result disclosure. Using validated psychological inventories, the cognitive style of hope was measured at baseline and psychological distress of depression and anxiety was measured at all time points. Seventy-six subjects participated among whom 71 persons (43 men and 28 women; mean age 38.9 ± 9.2 years) from 9 FAP and 24 HNPCC families completed the study including 39 mutated gene carriers. Four patterns of outcome trajectories were created using established norms for the specified outcome measures of depression and anxiety. These included chronic dysfunction (13% and 8.7%), recovery (0% and 4.3%), delayed dysfunction (13% and 15.9%) and resilience (76.8% and 66.7%). Because of the small number of participants, the chronic dysfunction and delayed dysfunction groups were combined into a non-resilient group to compare with the resilient group in all subsequent analysis. Two logistic regression

analyses were conducted using hope at baseline to predict resilience with depression and anxiety as outcome indicators. Both regression equations were significant. Baseline hope tended to be a significant predictor resilience outcome trajectory for depression ($B = -0.24$, $p < 0.01$ for depression); and anxiety ($B = -0.11$, $p = .05$ for anxiety). The current findings suggest that hopefulness might predict resilience after HCRC genetic testing in Hong Kong Chinese. Interventions to increase the level of hope may be beneficial to psychological adjustment of HCRC genetic testing recipients.

Keywords: *genetic testing, colorectal cancer, psychological resilience, hope*

Disruption to place attachment and the protection of restorative environments: A wind energy case study

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Deepening understanding of public responses to energy projects is of both academic and practical importance, given policies to increase energy supply from renewable sources in many countries. Although the 'NIMBY' (Not In My Back Yard) concept is commonly used to explain public opposition to wind farms, the concept has been extensively critiqued. This study applies an alternative approach based upon theories of place and social representations, and the use of mixed methods. In particular, we focus upon the symbolic meanings associated with a proposed project and the places affected by it, and how the adoption of these meanings relates to place attachment. Empirical data is provided from a case study of a proposed 750MW offshore wind farm in North Wales, using in-depth interviews, group discussions and a questionnaire distributed to local residents in two coastal towns ($n=455$). Results indicate how opposition is based upon a symbolic contradiction between 'nature' and 'industry' - between a place represented in terms of scenic beauty, providing a restorative environment for residents and visitors, and a wind farm represented to industrialise the area, 'fence in' the bay and create an eyesore. The data suggests that the contradiction between project and place-related meanings was experienced as a threat to identity

for those with strong attachment to the place, leading to negative attitudes to the project and oppositional behaviour. The results provide further evidence of the role place attachment has in shaping so-called 'NIMBY' behavioural responses to proposed development projects and challenges the common assumption that offshore wind farms will prove less controversial than those onshore.

Keywords: *energy projects, renewable sources, public responses, place attachment, case study*

Distress and functional impairment associated with eating-disordered behaviour in a community sample of women

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Distress and functional impairment associated with eating disorder attitudes and behaviours were examined in a large, general population sample of women aged 18 to 42 years. Participants ($n = 5255$) completed self-report measures of eating-disordered behaviour (Eating Disorder Examination Questionnaire, EDE-Q), general psychological distress (Kessler Psychological Distress scale (K-10) and impairment in mental health (Medical Outcomes Study Short Form Mental Component Summary scale, SF-12 MCS). Eating disorder features assessed included objective and subjective overeating, purging and non-purging weight-control behaviours, and key cognitive features, namely, concerns about dietary intake, concerns about eating, and concerns about weight or shape. In bivariate analysis, distress and functional impairment were most pronounced among participants who reported extreme dietary restriction and extreme weight or shape concerns, whereas excessive exercise was associated with minimal impairment. In multivariable analysis, in which scores on each outcome measure were regressed on all eating disorder features, while also controlling for age, BMI and physical health, each of the cognitive features assessed - concerns about food intake, concerns about eating, and concerns about weight or shape - showed strong, independent

associations with both K-10 and MCS scores, whereas the occurrence of subjective overeating and extreme dietary restriction made small, but still statistically significant contributions. The associations between elevated weight and shape concerns and higher levels of distress and functional impairment were particularly strong (K-10: $\beta = 0.35$; MCS: $\beta = 0.36$). Hierarchical linear regression models confirmed that eating disorder behaviours accounted for a negligible proportion of the variance in both outcome measures when compared with weight and shape concerns and other cognitive features. From a clinical perspective, the findings are consistent with the importance given to the "undue influence of weight or shape on self-evaluation" as a core component of eating disorder psychopathology. From a public health perspective, the findings indicate the need to conceive of body dissatisfaction, weight and shape concerns, and related constructs, as targets in their own right, rather than as mere risk factors for the occurrence of "clinical" disorders.

Keywords: *distress, functional impairment, eating disorders, women*

Do age, achieved level of education and demands on personal time influence personal values, self attributes and approaches to learning?

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The changing demographic characteristics of students in higher education are of concern to educators. This is particularly evident in the professional education of nursing students where the practical and theoretical aspects are combined in the pursuit of an academic qualification. A longitudinal study has been initiated to measure aspects of these characteristics. Two sets of measurements were taken to assess values using the Portrait Values Questionnaire (PVQ) (Schwartz et al., 2001), learning approaches using the Study Process Questionnaire (SPQ) (Biggs, 1987) and personal self concepts using the Self Attributes Questionnaire (Pelham & Swann, 1989) that are

extant in undergraduate nursing students at an Australian university. The pilot and second measurements done in the first and second years of the study have shown that (a) there are two distinct age groups present in almost equal proportion; (b) mature-aged students are more highly motivated despite their lower level of prior or pre-entry learning; (c) universal part-time employment leaves little time for academic endeavour; (d) Mature-aged students have personal self-concepts that are significantly different from younger students; and (e) older students show a greater incentive to succeed in the nursing education program. Personal values are statistically important precursors that motivate the ways in which students prefer to learn and have an influence on students' self-esteem.

Keywords: *age, education, demands, personal values, learning*

Do anger-congruent behaviours transfer across separate driving situations?

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It is unclear whether driver anger, and driving aggression, which seems to occur without provocation, arises because of events prior to those circumstances in which anger is experienced and aggression is exhibited. In this study, time pressure and enforced following of a slowly moving vehicle were used to manipulate drivers' anger as a means of assessing whether prior mood would influence affect and behaviour during a subsequent, non-provocative, drive. Ninety-six drivers drove twice in a simulated urban environment. During the first drive oncoming traffic and a slowly moving lead vehicle required that the driver travelled far slower than they would choose. Unrealistic time limitations also imposed a sense of time pressure. During the second drive, drivers again followed slower drivers and were required to respond to events not encountered in the manipulation drive. Anger evaluations, arousal (heart rate) and behaviour (mean and variation of speed and lane positioning) were measured during both drives and driver mood was measured before and after each drive. Drivers

exposed to slower lead vehicles and time pressures displayed reliable differences in anger, mood and behaviour during the manipulation drive when compared to control group drivers. Behavioral differences of speed and lane positioning carried over into the subsequent, unrelated drive and these effects were not limited to similar situations to what had been experienced during the manipulation drive. Drivers who had recently been pressured for time maintained more varied speeds and road positioning during uninterrupted periods of driving. Drivers impeded by a slower lead driver during the manipulation drive, approached road hazards with less caution and attempted more dangerous overtaking maneuvers in the general drive. It appears driving aggression may arise from events which have occurred in a previous drive. More research is needed to identify the extent to which these findings suggest a mood-related impairment in hazard detection.

Keywords: *anger, driving situations, mood, time pressure*

Do perceptions of the use of humour in the workplace mediate the relationship between job insecurity and measures of job satisfaction and psychological well-being?

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Given literature suggesting that humour buffers the effect of stress on aspects of well-being, the aim was to examine whether perceptions of the use of humour in the workplace would mediate the relationship between job insecurity and measures of job satisfaction and psychological well-being. One hundred and nine Australian workers (modal age 30-39) responded to an online questionnaire containing demographics and measures of job insecurity, perceptions of humour use at work, job satisfaction, depression, anxiety, stress, psychological well-being and social desirability. Hierarchical regression, controlling for social desirability, indicated that job insecurity predicted greater depression (but not anxiety or stress) and less job satisfaction and psychological well-being. An unpleasant climate of humour use in the

workplace predicted greater stress (but not depression or anxiety) and less job satisfaction. No mediation by the humour measure was evident. The effects of job insecurity and workplace humour appeared largely independent. Social desirability was always a uniquely significant predictor of all output measures. While it is unsurprising that job insecurity predicts aspects of well-being, it is useful to learn that specific aspects of workplace climate, such as perceptions of the sort of humour typically used, independently predict well-being. It is also important to control for social desirability when using self-report instruments in researching self-relevant constructs.

Keywords: *humour, stress, well-being, job satisfaction, job insecurity*

Do stressors cause strain or does strain cause stressors? Evidence from meta-analyses of longitudinal studies

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While existing stress theories propose stressor-strain effects, several authors suggest, however, that the reversed effects of strain on stressors might also explain their empirical relation. We propose that both effects exist, but they rely on different mechanisms that require different amounts of time. Reversed effects of strains on stressors should involve changes in job tasks, which are frequently caused by job changes: Employees under strain either drift towards high stress jobs (drift hypothesis), or employees are attracted by low strain jobs (refuge hypothesis). Such drifts/flights take some time to happen. On the other hand, we propose effects of stressors on strain to require less time. Overall, we propose reversed effects to dominate in long term panel studies, whereas stressor-strain effects should dominate in short term panel studies. Hypotheses were tested by meta-analyses of existing panel studies ($k=68-93$; $N=25.985-39.882$). Population correlations for 2-Variable 2-Wave matrices were estimated using the Raju et al. (1992) validity generalization approach, and then further analyzed using structural equation modeling. Simultaneous

meta-analyses of all studies did not provide evidence for causal effects in either direction. With length of time lag as a moderator, however, hypotheses were confirmed. Long-term (> 1 year) studies showed evidence for reversed causation (refuge hypothesis), whereas short-term panel studies yielded evidence for effects of stressors on strains. Despite the weak effects discovered, we conclude that indeed stressors affect strains. Panel studies covering much shorter time intervals are necessary to provide stronger evidence. When reversed causation hypotheses are tested, long time intervals are necessary. Finally, we conclude that results from cross-sectional studies are unlikely to yield inflated stressor-strain effects due to reversed causation. The reason is that our results support the refuge hypothesis of reversed causation, and the refuge process reduces rather than increases strain-stressor correlations.

Keywords: *stressors, strain, job changes*

Do we learn best from our own age? Increasing the effectiveness of a behavior modeling based vocational training

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Demographic changes and lifelong learning necessitates differentiated vocational training concepts. Although Behavior Modeling Training (BMT - Bandura, 1986) is an acknowledged training method, there is little research about the interaction it has with age. Previous research also indicates that a higher similarity between model and learner is beneficial, but so far, no study examined the interaction of the observed model's age and the age of the learner. In our study, we focussed on these interactions. As it is a well accepted training medium, we conducted the study in an e-learning context. 277 participants (18-75 yrs) finalized a 2.5h lasting BMT-oriented time and self-management e-learning program containing introduction, video and interactive task-modules. Three, otherwise identical, versions of the training were designed, showing a) a young, b) a middle-aged and c) an older model (25, 40, 55 yrs). Based on own age,

participants were divided into young, middle-aged and older learners and were randomly assigned to the three age-variations. The 3x3 design was analyzed comparing all 9 groups and focussing on the high- vs. low-congruence condition. The one-way ANOVA showed a superiority of the age-congruence condition: participants of all age-groups who learned with a model of their own age group showed a higher increase of applied knowledge ($p < .05$). Additional repeated measurement ANCOVA analyses showed a main effect of training gain, an interaction between learning success and pre-training knowledge and another between learning success and age-congruence. We further revealed a three-way-interaction between pre-training knowledge, age-congruence and learning success: learners who observe an age-congruent model benefit more than learners who observe a non-congruent model, and this effect is stronger for learners with a low level of previous knowledge than for those with a high level (all $p < .01$). Findings show that the effectiveness of BMT can be increased by observing an age-congruent model. This variation could easily be implemented in an e-learning training but might also be beneficial for other BMTs. Implications are discussed in terms of age adaptive vocational trainings.

Keywords: *age, behavior modeling, vocational training*

Do you have better verbal memory if you have better musical ability and musical intelligence?

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The current study investigated whether better musical ability and better musical intelligence were related to better verbal memory, based on the findings that musicians have larger left Planum Temporale that is also involved in one's verbal memory. Forty-one undergraduates participated in a musical ability test that examined pitch discrimination, rhythmic and melodic patterns identification and music reading. Musical intelligence of multiple

intelligence and verbal memory were also examined. Participants were then divided into high- and low- ability groups based on their overall musical ability, their ability to discriminate pitch, to identify music pattern, to read music, and their musical IQ. Results showed that participants with formal music training were better in pitch discrimination, music reading and musical IQ. However, they did not perform better than their counterparts who received no musical training in verbal memory. Further analysis illustrated that participants who had high ability in their overall musical ability, pitch discrimination, pattern identification, music reading and musical intelligence did not have better verbal memory than their low-ability counterparts. None of the musical abilities correlated significantly with verbal memory. It was concluded that music training, though can improve individuals' musical ability and musical IQ, does not necessarily result in better verbal memory. The sensitivity of the music test used might provide insights on the current findings. The relationship between musical ability and verbal memory requires further investigation. Practical implications of music in various cognitive tasks were discussed.

Keywords: *verbal memory, musical ability, musical ability*

Does increasing awareness promote changes in behavior? A study of injunctive normative influence on littering behavior

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The present experimental study examines the extent to which participants are persuaded to assume prosocial nonlittering attitudes, behavioral intentions and behavior following exposure to media with different injunctive normative messages. Initial attitudes towards littering, awareness of the littering "problem", and demographic variables were collected to test for moderation. 204 participants were randomly assigned to view one of three

experimental public service announcements that displayed a) a descriptive norm of littering and a negative injunctive norm (a man with a tear); b) a descriptive norm of litter and a positive injunctive norm (happy faces); or c) a control condition (children playing in nature). In addition, participants completed an online survey prior to viewing the video, and a post-survey in the lab subsequent to viewing the video. For the post-survey, each participant was given a plastic covered pen. Attitudes toward the environment, awareness of littering as a problem, as well as demographic information were assessed. Intention to litter and actual littering behavior (of plastic in the lab) were dependent variables. Results indicated that awareness of littering as a problem was a strong moderator, such that those with high awareness were more sensitive to injunctive normative messages than those with low awareness. High awareness participants were more likely to litter when the injunctive norm communicated social approval for littering ($\chi^2(1, N = 70) = 3.72, p < .05$), and they were less likely to litter when the injunctive norm communicated social disapproval for littering ($\chi^2(1, N = 69) = 6.72, p < .01$). The control condition had no significant differences. Thus, highly aware participants, counter intuitively, littered more when they watched a video with people smiling in response to litter than when they watched a video with a negative response to litter. The opposite was true for those with low awareness. Prior environmental attitudes and demographic variables did not moderate the effect. We conclude that awareness of a problem affects the way in which a person attends to injunctive normative information. Consistent with previous research, our findings suggest that persons with high awareness use more controlled, central processing (Göckeritz et al., in press), which increases the effects of the injunctive normative message. We conclude that "effective" messaging to reduce littering may not be the same for those with prior awareness of a problem than for those who are not aware. Implications of these findings are discussed.

Keywords: *prosocial nonlittering attitudes, behavioral intentions, media*

Does information order influence financial decision-making?

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How efficiently do individuals process information when making financial decisions? In particular, can financial decisions be influenced merely by altering the order in which the information used to make these decisions is presented? Serial order effects have been observed in a variety of situations that include: impression formation (Asch, 1946), evaluations of sequential information (Miller & Campbell, 1959), memory (Atkinson & Shiffrin, 1968), the arrangement of questions and responses on surveys (Schuman & Presser, 1981), consumer choices (Lohse, 1997), and portfolio selection (Levy & Levy, 2005). Two separate experiments were conducted by administering written questionnaires to over 1,000 undergraduate business students. In the first experiment, participants chose between two mutual funds on the basis of their reported past performance. In the second experiment, students chose between two capital investment projects on the basis of their computed net present values in three scenarios (base-case, worst-case, and best-case). For the first experiment, it was found that the fund with superior short-term results was chosen more frequently when short-term performance appeared last rather than being presented first. The magnitude of this effect was not sensitive to simulated market conditions for the two funds or to the time frame used for short-term vs. long-term performance. Furthermore, no significant differences were observed between finance majors and those students taking other business majors. For the second experiment, it was found that the riskier project was selected more often when the best-case scenario was presented last rather than being listed first. This effect was consistent across a series of hypothetical capital budgeting decisions. The two experiments demonstrate that financial decisions can be influenced by the order in which information about the available choices is presented. Specifically, the results of both experiments suggest the existence of a recency effect in which individuals tend to overemphasize the last piece of information that is presented to them. They are also consistent with Lee and Terry (2009), who found a recency

effect in which individuals choose riskier alternatives more frequently when potential outcomes are listed from worst to best than when they are listed from best to worst.

Keywords: *financial decision-making, serial order effects, information order*

Does the activity restriction model explain depression in older adults with Osteoarthritis: A longitudinal study in Shanghai, China.

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Management of Osteo-arthritis (OA) requires attention to pain and functional disability. Higher levels of depression are related to functional disability in older adults. The reciprocal relationship of pain, functional disability and depression has been explained using the activity restriction model (ARM) (Williamson et al, 1995, 2000). This model has been contested by others (Parmalee et al, 2007). The aim of the study was to tease out the temporal associations between pain, functional disability and depression using a cohort of older adults with clinically diagnosed Osteo-arthritis in Shanghai, China. A cohort of OA patients was examined at baseline and after an interval of six months to collect data on pain, functioning and depressive symptom. Data analysis using partial correlation and multiple regression was carried out on 139 who completed both surveys. Mediation analysis was used to test the ARM. Internal consistency reliabilities of the scales for pain, function and depression were good (α was between 0.75 and 0.97). Partial correlations (controlling for socio-demographics) showed that depression at baseline (T1) was significantly related to pain at T1 ($r=0.3$); function at T1 ($r=0.45$). Depression at follow-up (T2) was significantly related to Depression at T1 ($r=0.59$); function at T1 ($r=0.28$), function at T2 ($r=0.27$) and pain at T1 ($r=0.2$). The significant predictors of depression at T2 on multiple regression were depression at T1 (R square change 24%) all other variables were not significant. Mediation analysis at T1, showed that the relationship between pain and depression was fully mediated

by function (Sobel's statistic = 5.32, $P=0.01$). The close association of pain to functional disability in OA found in this study is similar to other studies. Pain at baseline has both a direct and indirect path (through functional disability at baseline) that effects depression, which concurs with the ARM. However, the main predictor for depression at T2 is depression at baseline. Further studies are required to seek modifiable behavioural variables such as self-efficacy and coping strategies that mediate these relationships.

Keywords: *depression, elderly, Osteoarthritis, pain, functional disability*

Does the experience of work-life balance change across career stage?

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Work-life balance (WLB) policies have become a major driver in recruiting and retaining skilled workers. As such, when considering the global trend of an aging workforce, it is imperative to understand how age structures affect WLB constructs. The present study will provide a detailed insight into how working individuals from difference career stages manage WLB and how exactly their needs change over time. Thus, this study aims to examine the role of career stage in Work-Family Conflict (WFC), Work-Family Facilitation (WFF) and WLB. 570 members of the Queensland Teachers' Union responded to a survey on Teacher Demands and Work-Life Balance. Respondents were grouped into one of four career stages based on their professional tenure, occupational tenure and score on the Adult Career Concerns Inventory – Short form (Perrone, Gordon, Fitch & Cibiletto, 2003). Supervisor, colleague, family and friend Support, Job involvement, WFC, WFF and WLB were also measured (Carlson, Kacmar, Wayne, & Grzywacz, 2006; Carlson, Kacmar, & Williams, 2000; Kanungo, 1982; O'Driscoll, Brough, & Kalliath, 2004). Multiple Regressions were run for each group as a preliminary assessment of the associations between Job involvement, Support, WFC, WFF and WLB. Significant associations between involvement/support and work-to-family conflict were found for participants in the

exploration, maintenance, and disengagement stages ($F(5) = 3.16, p < .05$; $F(5) = 2.71, p < .05$; $F(5) = 2.57, p < .05$, respectively), while those in the establishment, maintenance and disengagement stages displayed significant associations between involvement/support and family-to-work conflict ($F(5) = 5.39, p < .001$; $F(5) = 8.5, p < .001$; $F(5) = 3.55, p < .01$, respectively). Work-Family Conflict and Work-Family Facilitation were not significantly associated with WLB for any of the four career stages. Significant unique contributions also differed across career stage with supervisor support and colleague support yielding significant results for the exploration and establishment stages while job involvement and family support were predominant predictors for the maintenance and disengagement stages. Structural Equation Modelling (SEM) will be used to further evaluate model fit across career stage. In addition, Time 2 data is currently being collected and results will be analysed and reported over time. As career stage has not been investigated with relation to WLB, the data generated from this study is highly original and makes a valuable contribution to both international academic discussion and organizational/Government policies.

Keywords: *work-life balance, age, career stage, work-family conflict, work-family facilitation*

Driver behaviour theory: ninety years of psychological space in traffic

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With experience, car drivers learn to manage with risks on the road surprisingly well. But what are the critical measures that the drivers actually control while driving? Plenty of candidates have been presented by psychologists who often are eager to explain behaviour with one or few variables: attention, comfort, crash-risk itself, feeling of risk, effort, mental workload, task difficulty, and so on. This presentation follows one line of theorizing that dates back to the late 1910's - that of psychological space. Ninety years ago a Swedish engineer Chr. Sylwan looked down at busy street traffic from a skyscraper in New York and described the space required by vehicles and the psychological space in front of and on both sides of vehicles, as determined by

speed and anticipated paths of traffic units. Twenty years later Gibson and Crooks in their now well-known work vividly described the field of safe travel, the field of possible paths which the car may take unimpeded. Another thirty-five years later we investigated safety margins in space and time as important roles in our motivational model of driver behaviour. The "zero-risk theory" essentially suggested that the driver tends to satisfy his (excitatory kind of) motives in traffic but so that he/she feels no risk. It postulated a risk monitor that alerts and triggers an avoidant reaction when a safety margin threshold is violated or violation is anticipated. Safety margins and elicited emotional reactions were suggested to serve as simple heuristics in dynamic driver behaviour just as optimising subjective utility models have been substituted by the satisficing principle and simple decision heuristics in more static decision making. This was in line with Antonio Damasio's hypothesis, now achieving increasing interest among driver behaviour theorists. Road space allocation and safety margin control are now an essential goal in the intelligent vehicle and road concepts. However, we suspect that many years from now drivers will utilise the control loop which maintains safety margins, that is, keeping themselves within a safe "psychological space", or "safety zone", or "safety envelope" - through speed, steering, and attention control. This old concept will be put into the context of the present motivational and cognitive models of driving behaviour.

Keywords: *driving behaviour, risks, motives*

Education and training for practice with rehabilitation populations in the United Kingdom

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The aim of the current study was to: (1) Identify the training opportunities to prepare psychologists for practice with rehabilitation populations in the U.K; (2) Apply evaluation research theories to study the structures, processes, and outcomes of these training

programs; and to (3) make recommendations for improving training program outcomes in this area. All the currently accredited professional psychology post-graduate courses in the United Kingdom were contacted ($n=32$) and asked to complete a questionnaire regarding their training program structures, processes, and outcomes. Data were collected regarding training program structures (faculty and trainee characteristics, patient populations, and goals and curricula), processes (training opportunities for each of the Rehabilitation Psychology core competencies identified by the American Board of Rehabilitation Psychology), and outcomes (the extent to which trainees went on to additional training, and/or took jobs in rehabilitation settings). It is estimated that 10% of the world's population, approximately 650 million people, experience some form of disability, and this number is increasing. Rehabilitation Psychologists have developed methods to effectively assess and treat individuals with disabilities. However, Rehabilitation Psychology is currently not a recognized specialty of psychology in the United Kingdom. Opportunities to undertake practical training in some rehabilitation areas appear to be quite commonly available, but do not include many of the areas of physical rehabilitation. These findings suggest that currently available courses in the United Kingdom do not provide effective training to prepare a specialty workforce to best respond to important growing global health-care priorities to which Rehabilitation Psychology is relevant. Recommendations are given for a set of training pathways and guidelines for Rehabilitation Psychology.

Keywords: *rehabilitation, training programs, United Kingdom, disability, practical training*

Education and training in rehabilitation psychology practice in the United States and Canada

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The aim of the current study was to (1) identify the psychology internship and post-doctoral training programs in the United States and Canada which provide training in Rehabilitation

Psychology practice; (2) Apply evaluation research theories to study the structures, processes, and outcomes of these training programs; and to (3) make recommendations for improving training program outcomes in this area. Public sources of information regarding psychology internship and post-doctoral practitioner training programs were examined to identify programs which involved rehabilitation patient populations. Each training program identified was asked whether they provided specific training in Rehabilitation Psychology. Programs which responded affirmatively ($n=117$) were sent a questionnaire regarding their training program structures, processes, and outcomes. Data were collected regarding training program structures (organization and funding, faculty and trainee characteristics, patient populations, goals and curricula), processes (hours per week of didactics and supervision, frequency and types of evaluation, consistency with the Patterson and Hanson 1995 guidelines for training in Rehabilitation Psychology, consistency with the American Board of Rehabilitation Psychology core competencies), and outcomes (the extent to which trainees went on to additional training, became licensed, and became employed in teaching, research, or practice jobs, including whether these jobs were in rehabilitation settings). It is estimated that 10% of the world's population, approximately 650 million people, experience some form of disability, and this number is growing as a result of population growth, aging, a rise in chronic diseases, a rise in car crashes and violence, and medical advances that sustain life. Rehabilitation Psychologists have developed methods to improve adjustment, increase function, develop adaptive and compensatory techniques, employ assistive technology and personal assistance, modify the physical environment, reduce social stigma, increase social integration and participation, and advocate for disability rights and consumer participation. However, of the psychology training sites in the U.S. and Canada involving rehabilitation patient populations, few provided training in Rehabilitation Psychology. There is not enough specialty workforce pipeline capacity to best respond to important growing global health-care priorities to which Rehabilitation Psychology is relevant. Recommendations are

given for a clear set of training pathways and guidelines for Rehabilitation Psychology.

Keywords: *psychology internship, training programs, rehabilitation, education, disability*

Effect of death awareness on strength of believe, avoidance and depression of individual with obsessive – compulsive disorder

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The purpose of the present research was to study the effect of exposure therapeutic method with death recalling (death awareness) on believe, avoidance, and depression variables of individuals suffering from obsessive compulsive disorder. 40 subjects suffering from obsessive compulsive disorder were recruited by means of a random simple sampling method and were placed in experimental and control groups. All the subjects filled out Yale Brown Obsessive – Compulsive Scale in two stages, pre-test and post-test. Data analysis with MANCOVA in significant rate of $P < 0.01$ has shown that Death Awareness has positive effect on reducing of strength of the individual with O.C.D believes, avoidances and depressions. By paying attention to the results of present research it can be suggested to all psychotherapists all over Islamic Iran to use Death Awareness method as the elective therapeutic method for obsessive compulsive disorder.

Keywords: *death awareness, avoidance, depression, obsessive compulsive disorder*

Effect of optimism - pessimism attitude on depression and coping strategies amongst Indians during different life stages

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The present research was undertaken to study the effect of Optimism-Pessimism attitude on depression and coping strategies among adolescent, adult and old age subjects. The sample consisted of 600 subjects of either sex

equally divided into three groups: adolescents, adults and old age. All the subjects were matched on socio economic status and belonged to urban background coming from Dehradun, Uttarakhand, India. Educational qualification of all the subjects was 12th and above. Quota random sampling technique was used to draw the sample. Data was collected individually by using Optimism-Pessimism Scale developed by Prasar, D.S. (1998), Depression Scale of Shamim Karim and Roma Tiwari (1986) and Coping Strategy Scale of Folkman and Lazarus (1985). Factorial design (3x2) was used to test the proposed hypotheses. The inferences were drawn by calculating Means, SDs, ANOVAs and 't' tests. The findings revealed that Pessimists have significantly higher level of depression than the Optimists subjects. Optimists possessed significantly higher tendency of using Distancing, Seeking Social Support, Planful Problem Solving and Positive Reappraisal techniques of coping strategies as compared to the Pessimists. Adolescents were found to be more optimistic than adults and old age subjects. Adults were found to be significantly higher on the level of Depression as compared to adolescents and old age subjects. No significant difference was found on Sleep Disturbance dimension of Depression among all the three groups of the study. Old age subjects were found to have significantly higher tendency of using overall coping strategy than adults and adolescents. Seeking Social Support and Escape Avoidance tendency of Coping strategy was similar among all the three groups of the study. Males were found to possess significantly higher levels of Sleep Disturbance, Social Withdrawal and Self Centeredness as compared to females. Significantly higher tendency of using Planful Problem Solving and Positive Reappraisal technique in stressful situations was found in male as compared to female subjects. Optimism / Pessimism Attitude significantly affect the level of Depression and Coping strategies amongst different age groups in Indian population. The findings of the study will be discussed in reference to current Indian social context.

Keywords: *optimism, depression, coping strategies, life stages*

Effectiveness of online methods for proctoring high-stakes exams

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The purpose of this paper is to describe and demonstrate several new online methods of proctoring important exam administration. It will also present research on their effectiveness. The author conducted a meta analysis of security incident "tickets" or "logs" created by Kryterion online proctors as they detected and dealt with various types of security problems during several thousand certification and distance education exams. The paper will provide a listing and categorization of the types of security problems occurring for high-stakes testing where no proctor is physically present but other methods of proctoring are. The frequency of each type of security incident occurring under conditions imposed by online proctoring will be presented indicating that they are lower than might be expected for a circumstance where individuals are taking the high-stakes test usually in their own home without a proctor physically present. A comparison of these results with security incident results from traditionally proctored exams lends credibility to the idea that online proctoring methods may be a more effective alternative.

Keywords: *exam administration, online proctoring methods, distance education exams, security problems, high-stakes testing*

Effectiveness of structural family therapy on Oppositional Defiant Disorder

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The aim of the present study is to investigate the effect of structural family therapy on five to ten year-old children with Oppositional Defiant Disorder. This study is a pseudo experimental single subject study with pretest-posttest design. In order to do the study four families with at least one child with Oppositional Defiant Disorder were selected by lumpy sampling method. The whole families' members were exposed to therapy interventions with the same treatment design for eight sessions. The sessions

were held weekly. Using Rutter's behavioral problem scale, the cases were assessed in four phases; before, during, and after the completion of intervention and one month after the last session as the follow up. The data were presented in charts. The results indicated that the structural family therapy is a significant factor in decreasing the symptoms of Oppositional Defiant Disorder. The Structural Family Therapy was effective to decreasing the symptom of Oppositional Defiant Disorder. Regarding to present research results, it is recommended this method should be used for children with Oppositional Defiant Disorder.

Keywords: *structural family therapy, Oppositional Defiant Disorder*

Effects of a labour dispute on students: A longitudinal perspective

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Despite the increasing frequency of university labour disputes, few studies have examined their impact on students, with even fewer focusing on the longitudinal perspective. The current report presents a longitudinal (4-phase) study of the affective, cognitive, and behavioural responses of students to a 12-week strike by teaching assistants and contract faculty at a large Canadian university. Students were asked to complete questionnaires approximately one week before the strike, one week and five weeks into the strike, and two weeks after the labour dispute had been settled. A total of 104 participants completed all four phases of the study. A comparison of students who completed all phases versus those who did not revealed minimal differences on pre-strike measures. Repeated-measures ANOVAs using Bonferroni-adjusted levels of significance indicated that the gratification that students felt as the strike began was soon replaced by apathy toward their own academic work. Students' opposition to the strike and to both the position of the administration and the union generally increased over the strike's duration. Further, students' satisfaction with their academic

programs declined during the strike and after the dispute was settled. Although students' perception of fair treatment increased after the strike, their willingness to recommend the university to a friend decreased. Students' perception of social support from professors and teaching assistants, and the belief that they had at least one faculty member to turn to, declined throughout the labour dispute, reaching its lowest level in the fifth week of the strike. For the majority of students, perceived support from professors and teaching assistants returned to pre-strike levels after the dispute was settled. Support from fellow students followed an identical pattern. Support from non-university friends and relatives was greatest in the pre-strike period, with subsequent declines throughout the dispute. Students reported spending fewer hours on academic studies and in the library during the strike, but more hours on email/Facebook and on recreation. Students also reported sleeping later than usual on weekdays. Increased consumption of alcohol over the course of the strike approached significance. Recommendations for improving student response to an academic labour dispute will be discussed.

Keywords: *academic labour dispute, strike, students, social support*

Effects of a social cognitive career theory based group intervention on career decision self-efficacy and vocational outcome expectations of undergraduate students

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Originated by Bandura's general social cognitive theory, Lent, Brown and Hackett developed a modern career theory called Social Cognitive Career Theory (SCCT). Many studies have primarily focused on the relations between the key elements of SCCT (self-efficacy, outcome expectations, goals, barriers). However, more intervention studies are needed to understand the effectiveness of SCCT-based programs and there is a call from the theorist and field researchers as well (Lent, 2005). Thus, this study aimed at examining the effects of a social

cognitive career theory based group intervention on career decision self-efficacy and vocational outcome expectations of undergraduate students. A pretest-posttest equivalent group design compared students who completed the 10 week intervention ($n = 16$) with a quasi-control group of students ($n = 16$). A repeated measures ANOVA was used to assess students' pre-intervention and post-intervention self-efficacy career-decision and vocational outcome expectation scores. The results indicated that students who completed the career intervention program showed increased career decision-self efficacy and vocational outcome expectation when compared with quasi-control group. As hypothesized by Lent et. al. and other researchers, doing activities in order to increase four sources of learning experiences (personal accomplishments, vicarious learning, emotional arousal, and verbal persuasion) also helped increasing self-efficacy and outcome expectations of undergraduate students. The importance of preparing theoretically based career interventions and the increased need for research in this area are discussed.

Keywords: *Social Cognitive Career Theory, career decision self-efficacy, vocational outcome expectations, undergraduate students, self-efficacy*

Effects of alcohol (0.5 ‰) and MDMA (100 mg) on simulated driving performance and traffic safety

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Research convincingly shows that drug use and especially multiple drug use and drug-alcohol combinations among drivers is an important risk factor for traffic accidents. Since drug- and medicine use is proportionally increasing over the years, special efforts have to be directed towards gaining better knowledge of the various aspects of this problem and developing appropriate solutions. The objective of the recently started European Commission (EU) project DRUID (Driving under the Influence of Drugs, Alcohol and Medicines) is to give scientific support to the EU transport policy

(White Paper, 2001) by establishing guidelines and measures to combat impaired driving. In the framework of DRUID, a study was carried out to assess the effects of single dose of (\pm) 3, 4-Methylenedioxymethamphetamine (100 mg MDMA, "ecstasy") and a single dose of alcohol (0.5 ‰), and a combination of the two, on simulated driving performance. A group of 20 experienced, healthy MDMA-users were administered MDMA (0 and 100 mg) and alcohol (0 and 0.5 ‰) according to a 4-way, double-blind, placebo controlled, repeated measures, cross-over design. Driving performance is assessed on three levels: the strategical level (general plans), manoeuvring level (controlled action patterns) and control level (automatic action patterns). It is expected that alcohol will influence performance mainly on the control level, expressed in an increase the amount of swerving. The main negative effect of MDMA is expected at the manoeuvring level expressed as an increase in the amount of risk a participant is willing to take. For the alcohol-MDMA combination it is expected that the stimulating effects of MDMA will moderate alcohol induced effects on the control level. However, to lead to even greater impairment at the manoeuvring level by inducing greater risk taking as compared to the separate use of the substances. Data is currently being collated and results will be presented at the conference.

Keywords: *drug use, drivers, alcohol use, risky behaviours, substance use*

Effects of anxiety on working memory

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Despite considerable research demonstrating the differential effects of state and trait anxiety on working memory performance, little research has investigated the mechanisms which might underpin this relationship. Premised on the Processing Efficiency Theory (PET; Eysenck & Calvo, 1992), which predicts that elevated state anxiety might contribute to deficits in working memory (WM) performance, the present study examined the effect of state and trait anxiety on the functioning of the central executive (reading span task), visuo-spatial sketchpad (analogical

mapping task) and phonological loop (forward and backward digit span tasks) components of WM (Baddeley & Hitch, 1974). A student sample was employed and participants were assigned to High Trait Anxious (HTA; $n=30$) or Low Trait Anxious (LTA; $n=30$) groups based on a median split of scores on the State-Trait Anxiety Inventory (STAI), with state anxiety manipulated through the threat of electric shock. Half the participants in each Trait Anxiety group were randomly assigned to the Shock Threat and Shock Safe Conditions based on their arrival at the laboratory. Contrary to PET's claim, there were no significant state or trait anxiety group differences on phonological loop performance as indexed by a digit span task. In support of PET, however, participants in the Shock Threat Condition recalled fewer last words and cloze test words than participants in the Shock Safe Condition (Daneman & Carpenter, 1980) on a reading span task which was employed to tap the central executive. In partial support for PET, significant Trait Anxiety x Shock Condition interactions were found on mapping tasks (Tohill & Holyoak, 2000) utilized to tap visuo-spatial sketchpad performance. The pattern of these interactions suggests that elevated state anxiety might contribute to performance dissociations on visuo-spatial tasks, but that this effect is moderated by the individual's trait anxiety status. Results are discussed in terms of PET and clinical implications are suggested.

Keywords: *trait anxiety, working memory, processing efficiency theory, state*

Effects of diabetes knowledge, attitudes, and self-management on satisfaction and the impact of diabetes

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The challenge that Type 2 Diabetes Mellitus presents to individuals, families, and health services is substantial. It is important to identify the most effective strategies to manage diabetes and reduce the occurrence of complications. Psychological measurement in diabetes has been widely studied and developed, but research examining the links between diabetes

knowledge, attitudes, self-management, the impact of diabetes, and satisfaction is scarce. The main objective of this research is to identify the relationship between knowledge, attitudes, and self-management and their effect on satisfaction and the impact of diabetes. Through the Department of Endocrinology and Diabetes, Alfred Hospital, Melbourne, we mailed out 500 questionnaire packs, including measures of diabetes knowledge (DKN), attitudes (ATT39), self-management (SDSCA), and quality of life (DQoL) to people with Type 2 diabetes. DQoL of patients treated at the hospital was evaluated based on their satisfaction, impact of diabetes, and social and diabetes worry. We analyzed 100 usable sets. Approximately 45% of the participants were women and 55% were men, aged between 30 and 70 years. Due to missing values for the social worry subscale in the DQoL, only satisfaction and diabetes impact subscales were used for analysis. We applied Structural Equation Modeling (SEM) to explore the interrelationships of the variables, using AMOS 17.0. The mean age of participants was 58.3 (\pm 10.82 years). Participants' mean time since diagnosis with diabetes was 12.5 years (\pm 9.15 years). Results of the study revealed that self-management ($p < 0.05$) and the impact of diabetes ($p < 0.05$) were significant predictors of satisfaction, whereas, attitude to having diabetes affected the impact of diabetes ($p < 0.05$). The indexes of fit for the tested model indicated a good fit: TLI=1.03, CFI=1.00, GFI=0.99, AGFI=0.96, RMSEA<0.01, and $\chi^2(2) = 1.43$, $p=0.49$. Greater understanding of the relationships between knowledge, attitudes, and self-management, and their impact on quality of life in people with diabetes is important for developing appropriate strategies for diabetes management that can be tested through interventions in future research. We discuss implications of these findings for self-management and its impact on QoL in people with type 2 diabetes.

Keywords: *diabetes, knowledge, attitudes, self-management, satisfaction*

Effects of reading various genres of books on empathy: A panel survey of elementary and junior high school students

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The purpose of this study is to examine the longitudinal effects of reading books on empathy. A panel survey was conducted with a total 933 elementary school students and 450 junior high school students. They were asked to indicate their frequency of reading all genres, such as picture books, fantasy, science fiction, adventure and historical fiction, mystery, old tales, biography, instruction guides, illustrated books, dictionaries, text books, books about hobbies, comic books, magazines, and rule books for video games, and their empathy. A multiple regression model was constructed to examine the causal relationship between each genre's reading frequency and students' empathy. The results showed that elementary school students' frequent reading of fantasy, adventure, and historical fiction, illustrated books and dictionaries, and text books increased their score on measures of empathy or some subcategories of empathy. Junior high school students' reading of science fiction and mystery increased their score on measures of some subcategories of empathy, whereas their frequent reading of picture books decreased their score on measures of a subcategory of empathy. Depending on genres of reading books, the empathy in the students of elementary and junior high schools increased and decreased.

Keywords: *empathy, reading, longitudinal effects, genres, school children*

Effects of social relations to parents and teachers on the changes of students' perceived instrumentality

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Perceived Instrumentality (PI) is an important motivation factor for students to regulate their school work. Research has shown that PI has positive effects on students' study efforts and achievements (Creten, Lens & Simons, 2001; Simons, Dewitte, & Lens, 2004). Recently, there has been increased research interest in what

increases PI on school work for future goals students hope to accomplish in society after graduation. In this study, we examined the effects of social relations to parents and teachers on the changes of students' PI over time by using a longitudinal data set. Parents and teachers are significant others who have huge impact on students' learning and motivation; therefore, it is necessary to investigate their influences on students' PI changes over time. A four-year longitudinal data was analyzed by using the Hierarchical Linear Modeling technique. Parents' and teachers' expectations on students' school works and their career guides were used as predictors which were measured in the first year of data collection. The change measure of students' PI over a 4-year period was a dependent variable in the analysis. A total of 6,908 students in grade 7 were followed for 4 years until they became 11th graders. They were selected from 150 junior-high schools. The PI had been increased over a 4-year period. The growth pattern turned out to be negatively quadratic over time. For the initial status of PI, parents' expectations and career guides were significantly positive predictors; the variable of teachers' expectations was a significant predictor, but the measure of their career guides was not. For the linear growth rate of PI, only parents' and teachers' expectations were significant and the other predictors were not. The two predictors were also significant predictors on the quadratic term of the PI change rates in a negative way. The results of the study show that parents' and teachers' expectations had significant influences on the increased changes of students' PI over time. In contrast, their career guides did not have any effects on the changes. The results suggest that expectations of significant others on students' school works would increase their perceptions on why they have to study hard in school over time. However, their career guides did not make any differences in the PI changes in the study. The reason might be that their career guides were not specific much or that the life goals students had then would be built up in earlier ages so that later career guides from parents and teachers did not have much impact on the PI changes. Regarding these interpretations, further empirical investigations are necessary.

Keywords: *perceived instrumentality, students, social relationships, parents, teachers*

Effects of the key steps and non-key steps in worked example learning about algebraic operations

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Paas (1992) found that the learning effects between incomplete and complete worked examples were not obviously different, but Stark (1999) discovered that the learning effects of incomplete worked examples were better than complete worked examples. We analyzed these previous studies and proposed that the learning effects of key steps in worked examples determined the worked example learning effects. This means that if learners understood the key steps, they would master the worked examples. Conversely, if they didn't understand the key steps, they would not get through the worked examples. In the first experiment, 120 seventh grade students chosen with a pre-test were shown four kinds of incomplete worked examples about absolute value inequality operation and were requested to fill out the deleted steps. Then, another 90 seventh grade students were separately shown and learnt complete worked examples (CWE), incomplete worked examples with a deleted a key step (IWEK) or incomplete worked examples with a deleted a non-key step (IWEN), and took part in the post-tests. In the second experiment, firstly, 90 seventh grade students were shown three kinds of incomplete worked examples about powers with the same base operation individually and were requested to fill up the deleted steps. Then, another 60 seventh grade students were respectively shown CWE or incomplete worked examples which deleted the key step and were given timely feedback (IWEKF), and participated in the post-tests. The third experiment was about the extraction operation worked example learning, and the experiment design and procedure were the same as the second experiment. The first experiment showed that the learning effects of CWE and IWEN were better than IWEK, and there was no significant difference between CWE and IWEN. The second experiment showed that the learning effects of IWEKF were

obviously higher than CWE, but in the third experiment, there was no significant difference between IWEKF and CWE. From the results, we concluded that the key steps significantly influenced effects of the incomplete worked example learning, and the non-key steps had no obvious effect on the incomplete worked example learning. The incomplete worked example learning with feedback could improve the learning effects of powers with the same base operation, but couldn't improve the learning effects of extraction operation.

Keywords: *key steps, worked example, learning*

Effort-reward Imbalance and psychological health: The impact of offshore working in the oil and gas industry

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The oil and gas industry plays a vital, global, economic role, in terms of the financial benefits deriving from the extraction of oil and gas reserves, and the substantial workforce employed by the operations that support the industry. However, the UK North Sea sector of this industry currently faces serious staff recruitment and retention problems. It has been suggested that this may be, in part, due to the psychological stress of offshore working. The impact on psychological health of offshore working is therefore an important area of investigation. However, to date little research has been done in this area. This paper reports part of a large-scale, mixed methodological study that sought to explore these issues. Our aim here is to examine the impact of offshore working on the health of UK sector oil and gas employees, using the Effort-Reward Imbalance model (Siegrist et al., 1997). A cross-sectional, questionnaire postal survey of 2,300 UK sector, offshore employees was conducted; 732 questionnaires were returned, giving a response rate of 32%. A battery of questionnaires included: the Effort-Reward Imbalance at Work Questionnaire (incorporating Over-commitment); the 12-item, General Health Questionnaire as a measure of psychological

health; offshore quality of life and family contact measures derived from focus groups conducted in the qualitative stage of our study. Hierarchical regression analyses were conducted. Effort-reward imbalance was independently associated with psychological health at a highly significant level ($p < 0.001$). When over-commitment was added, these two variables accounted for 24% of the variance in psychological health ($p < 0.001$). Offshore quality of life contributed a further 6% ($p < 0.001$). Family contact did not, however, significantly add to the explanatory power of the model. Effort-reward imbalance, over-commitment and offshore quality of life are important contributory factors to the psychological health of offshore workers, and these are, to varying degrees, modifiable. It is anticipated that the findings of this study will be of use to employers who are concerned with the recruitment and retention of offshore staff.

Keywords: *oil and gas industry, staff recruitment, staff retention, psychological stress, Effort-Reward Imbalance model*

Elicitation of expert opinion concerning uncertain events: Using a 4-step question format, DELPHI workshops, and an online elicitation tool

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The current study aimed to develop an elicitation protocol to help minimize cognitive biases in expert judgements of uncertain events. We used a 4-step question format to reduce overconfidence in interval judgements. This was embedded in a DELPHI facilitated workshop to minimise any halo effect in the expert panels. A purpose built online elicitation tool was used to capture and display the interval judgements, to facilitate discussion in the workshops. DELPHI workshops were run on diverse topics including the impact of new pharmaceuticals on recycled water quality and environmental factors influencing species extinction in frogs. Workshops included between 8 and 12 experts and 40 to 60 questions. Domain specific calibration questions, with known answers, were interspersed with elicitation questions regarding unknown or future events. For each question, expert's first entered their private interval

judgements into the online elicitation tool using the 4-step question format. The intervals for all panel members were then displayed on a single chart, and the facilitator encouraged discussion regarding: the similarities and differences of opinion; and the background knowledge which informed judgements. Post discussion, panel members had an opportunity to privately update their estimates in the online tool. The post-discussion estimates were taken as the final judgements, and the calibration questions used to assess a panel's accuracy. Final interval judgements may be aggregated for a group judgement using statistical techniques, or the visual overlap between intervals used as an indicator of panel consensus, or lack thereof. The 4-step question format has been shown to substantially reduce overconfidence in experts from multiple disciplines ($N=135$, 17% [95% CI 13, 21]). By combining the 4-step format with the DELPHI workshop protocol, final expert judgements were calibrated to be 63% [59, 67], that is to say the expert panel provided interval judgements which captured the true value (when known) 63% of the time. Using the 4-step question format to reduce overconfidence, and the DELPHI workshop to reduce halo effects, cognitive biases can be minimised improving the calibration of the expert panels. Furthermore by leveraging an online elicitation tool virtual expert panels become feasible and practical, both reducing the cost of elicitation and improving levels of participation.

Keywords: *elicitation protocol, cognitive bias, expert judgements, uncertainty*

Emotional and behavioral responses to terrorism threat

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We conducted two bi-national studies of emotional and behavioral responses to terrorism threat, examining both feelings and projected

action. The studies employed scenarios in which terrorists were planning to shoot, or had already shot, MANPADS (shoulder-fired missiles) at commercial airliners as they were taking off from the airport. The scenarios included two factorially crossed variables, each with three levels: (1) government announcements regarding threat severity and (2) public response, expressed as variation in airline ticket sales. In Study 1, conducted in California and Spain, the threat was expressed as a plot that had been discovered in the planning stage. In Study 2, conducted in California and Israel, the threat was more severe, consisting of an escalating series of attacks on planes. There were 216 participants from each country in both studies. In California, the respondents had no personal experience with terrorist attacks; while in Spain and Israel there have been dramatic incidents with which the respondents were familiar. Most respondents were students, except that in Spain we were able to also recruit people from a national registry of terrorism victims. Each subject saw only one of the nine scenarios. After presenting the information in the scenario, we asked them to imagine they had planned a trip to a destination 1500 miles away. We regarded that as sufficient for other modes of transportation to be inconvenient. The importance of the trip was varied within subjects; the trips were to a close friend's wedding, a job interview, or a family vacation. In Study 1, respondents expressed only moderate fear, and most indicated they would fly as planned. In Study 2, the fear was elevated as the attacks escalated, and more trips were cancelled. Government announcements and ticket sales had little impact on either fear or planned flying. People were more likely to fly to the wedding or job interview than for the vacation. Emotions show more responsiveness to threat than actions. An important feature of attacks on commercial flights is that, unlike biological attacks or bombs in public places, degree of exposure to the risk is under personal control; one can simply refuse to fly.

Keywords: *terrorism, emotional response, behavioural responses*

Emotional intelligence cross-cultural assessment: Adaptation and validation of an Argentinean version of the TEIQue (trait emotional intelligence questionnaire; Furnham & Petrides, 2003)

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School desertion is the result of a combination of internal and external factors. The causes of school desertion are multiple but in all cases create the conditions of failure of social integration, as it reduces significant chances of personal realization. The present study shows the importance of evaluating quality of life of adolescents undergoing "ecological transition" (Bronfenbrenner, 1979) from primary to secondary in order to understand this phenomena. As in Argentinean public schools adolescents tend not to continue their studies it is crucial to invest in research on this issue. Following a descriptive design, 500 adolescents participated in answering five inventories specially designed for this research. Ages ranged from 13 to 15 years, consisting of 250 men and 250 women. 68 teachers of these adolescents also participated. Instruments selected were: PQoLI-Perceived Quality of Life Inventory (Mikulic, 2001); CPI-Coping Response Inventory (Moos, 1993); LISRES-Life Stressors and Social Resources Inventory (Moos, 1994); SIASCA-Structured Interview to Assess Strength in Children and Adolescents (Mikulic, 2001) and SIATP- Structured Interview to Assess Teachers Practices (2007). The Perceived Quality of Life Profile shows specific configuration of factors regarding adolescents and environments. Also, importance and satisfaction with life shows differences according to gender. Data obtained suggests that adolescents' resources and their teachers' characteristics are resilient sources. Parents, siblings and friends are perceived as an important resource but when importance and satisfaction with life assessed turn out to be a conflict factor. There is only one convergent factor regarding perceived quality of life in adolescents and it is "teachers as resilient guides". Importance and satisfaction with life correspondence indicates that students assign high importance to teachers' role and school context. Family and school context and climate

represent two significant factors in promoting adolescent resiliency. Specifically, teachers guide as a medium to develop resiliency and convey hope is an important factor to prevent school desertion.

Keywords: *school desertion, social integration, adolescents, teachers, school climate*

Emotional-social Intelligence and dyadic adjustment of couples

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Bar-On (2009) hypothesized that those individuals with higher than average emotional-social intelligence (EQ-i) are in general more successful in meeting environmental demands and pressures. He also notes that a deficiency in EQ-i can mean a lack of success and the existence of emotional problems. In 1976, Spanier created an instrument to measure the separate components of marital adjustment and called it the Dyadic Adjustment Scale (DAS). The separate dimensions of marital adjustment were reported to be the following: (a) consensus on matters of importance to marital functioning, (b) dyadic satisfaction, (c) dyadic cohesion, and (d) affectional expression. The purpose of this study is to explore whether the level of emotional-social intelligence of the partners influences the dyadic adjustment marital relationships. 90 couples (50% males and 50% females) aged 32 to 59 years completed the Dyadic Adjustment Scale (Spanier, 2009) and Emotion Quotient Inventory (Bar-On, 2009). This study examined relationships between emotional-social intelligence and different patterns of marital interaction. Correlations and hierarchical moderated regression analysis show that emotional intelligence differentiates dyadic satisfaction, consensus and cohesion of couples but not the affectional expression. The results provide different pattern of marital interaction and emotional intelligence for males and females. These findings are important for clinicians and researchers, for family counseling and psychotherapy revealing important information about the influence of emotional intelligence on couple relationships.

Keywords: *emotional-social intelligence, marital adjustment, dyadic adjustment*

Enabling formalization, collective mood, and team performance: Testing a dynamic mediated longitudinal relationship

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The objective of this study is to test a dynamic mediated relationship that involves the following hypotheses: that change in work team climate of enabling formalization over time is positively related to change in perceived team performance over time, and secondly, the aforementioned relationship is partially mediated by change in collective mood (job tension) over time, so that change in enabling formalization is negatively related to change in collective job tension, which in turn is negatively related to change in perceived team performance. A sample of 174 work teams participated in the study. Data were gathered at three time points along a 2-year period. The study variables were operationalized at the team level. The data were analyzed by means of hierarchical linear modeling. The study hierarchical models were estimated by using the Multilevel module of PreliS/Lisrel 8.80. The results obtained supported the study hypotheses. Change in enabling formalization was positively related to change in perceived team performance (.15, $p < .01$), and negatively related to collective mood (job tension, -.15, $p < .05$). Moreover, after controlling for change in enabling formalization, collective tension was negatively related to perceived team performance (-.13, $p < .01$). The indirect effect of change in enabling formalization on change in perceived team performance via change in collective tension was statistically significant. Adler and Borys (1996) proposed to distinguish between two distinct types of formalization (coercive and enabling) to disentangle the inconsistent pattern of relationships shown by this variable. Our study confirms that enabling formalization is beneficial in the sample of work teams investigated, since it contributes to improving work team performance and reducing

job tension. The analytical strategy used and the results obtained support the idea that the addressed relationships are dynamic and develop over time

Keywords: *work teams, formalization, team performance, collective mood, job tension*

Ensuring test security in online assessment for recruitment

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Two main types of tests are used in recruitment settings. On the one hand there are tests of maximum performance where items have right and wrong answers. On the other hand are tests of typical performance or preference, where there are no 'right' answers. This presentation considers how each of these types of assessment instrument poses different problems for the recruiter. The solutions necessary to reduce the likelihood of faking good on preference measures are very different to those needed for reducing the risk of cheating on measures of ability. The solutions adopted by SHL to each of these challenges will be illustrated with the Verify suite of ability tests and the OPQ32r personality inventory. The former uses test generation techniques to create novel instruments for each test taker and it includes a provision for a follow up supervised assessment for short-listed applicants. In addition procedures are in place to add further layers of security to protect the items against compromise and to maintain the validity of assessment scores. These layers include web patrols and data forensics analyses. The former involves regular proactive searching of the Internet for the presence of test items and procedures for ensuring their removal. The latter relates to methods of analysis used to check the item response data for indicators of aberrant responding patterns. For preference measures, lack of supervision is not the issue as faking good is 'invisible' and can take place as easily under supervision as when there is no supervision. Instead, item format and scoring methods are used to reduce the ease with which someone can fake good. This is embedded in a large set of procedures for reducing both the means and the

opportunity applicants might have for distorting their data.

Keywords: *online assessment, recruitment, maximum performance, typical performance, faking*

Environmental attitude of New Zealand farmers: The importance of affect and direct contact with nature

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The first aim was to assess the relevance of a tripartite attitude model to assess farmers' attitude towards the natural environment, and of particular interest was the affective attitudinal component, so commonly absent from environmental attitude models. The second aim was to examine the extent to which direct experience with nature determined farmers' attitude towards the environment, and notably, how it related with the affective attitudinal component. Models were assessed using the Structural Equation Modeling framework. Models were compared between New Zealand farmers who did not have native forest fragments on their property and farmers who had forest fragments; and within the group of farmers with fragments, farmers with forest fragments by choice were compared to farmers with fragments by chance. Farmers' attitude model was constituted of two parts. The first part assessed farmers' general attitude towards the natural environment, measured by Dunlap and colleagues' (2000) New Ecological Paradigm (NEP) scale and Schultz' (2001) Environmental Motives Scale (EMS). The second represented farmers' specific attitude towards New Zealand native forest using a tripartite attitudinal model, defined by cognitive, affective and conative (behavioural intentions) dimensions. Direct experience with nature included frequency of direct contacts with New Zealand forest and frequencies of outdoor recreational activities. We found that farmers with and without forest fragments responded to different attitudinal models. The attitude construct of farmers without forest fragment suggested that they perceived native forest differently whether it was on farmland or outside, whereas farmers with fragments presented a more integrated

attitude towards the forest. Also, the affective attitudinal response of farmers without fragments was more cognitively-driven than for farmers with fragments. Direct experience with nature had a strong and positive impact on farmers' environmental attitude in general. However, the strongest effect of direct experience with nature occurred with farmers' affective response. Thus, farmers with forest by choice and farmers with forest by chance with the same amount of direct experience with nature showed almost equal affective response, but still different levels of pro-environmental beliefs. These results showed that a tripartite attitudinal model including an affective dimension was relevant to the assessment of farmers' attitude towards the natural environment. They also suggested the importance of direct contact with nature in explaining farmers' pro-environmental attitude.

Keywords: *environmental attitudes, New Zealand farmers, affect*

Environmental risk perception: The case of global warming among lay people

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The aim of this study is to understand public perception of environmental risk, by exploring the social representation of Global Warming linked to environmental concern, personal involvement and conservation behavior. A Web questionnaire has been conducted among a sample divided in three groups based on environmental concern scores (Dunlap, Mertig, & Jones, 2000): pro-environment member of environmental association, pro-environment non-member, and "against environment". The social representations are examined by the free association method and a prototypical analysis (Vergès, 1985) coupled with an SCB characterization (Guimmelli, Rouquette, 2003). The three independent level of personal involvement (Flament, Rouquette 2003): personal identification, valorization of the issue, and action perceived ability, are studied as mediator variable in the investigation between social representation and behavior. Global Pro-environmental behavior is measured as a

complex assemblage of specific behavior. Pro-environmental behaviors are conditioned by the social representation of environmental issues, as the social representation emerges from a range of behavior, and communication in a specific social group. The specific association produced by each group shows this double link. If the “pro-environmental” activist as lay people evokes spontaneously the scientific causes as the consequences of global warming, they differ with a strong presence of catastrophic expressions among lay people. Meanwhile the “against-environment” refers to political fallout and evokes skepticism. Furthermore we can observe that a strong personal involvement seems to be essential to allow people to adopt real pro environmental behavior. This study shows how risk communication could be counter-productive when even informed and concerned people are slowed in their conservation behavior by information stressing dramatic consequences without giving efficient coping strategy in order to increase action’s perceived ability. Therefore, we are proposing a strategy based on the manipulation of the personal involvement dimensions in order to promote global conservation behavior and by this way influence the emergence of a new social representation taking account of the green-action we have to promote to face Global Warming.

Keywords: *pro- environmental behaviors, environmental risk, global warming, personal involvement, conservation behaviour*

Envisioning engagement: Social representations of public engagement with renewable energy technologies

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UK energy policy to reduce carbon emissions is rapidly evolving. A substantial increase in renewable energy technologies (RETs) such as wind turbines, biomass plants and solar panels has been proposed but little is known about how these policy changes are being communicated to the public. This study aimed to investigate changes over time in the way in which

newspaper images anchor and objectify public engagement with renewable energy technologies. This paper draws upon the theory of social representations to explore how public engagement with renewable energy technologies is represented within newspaper images. Images of RETs were collected from stratified sample of UK national newspapers over a two-year period. These images were thematically analysed. Wind turbines were the most frequently depicted renewable energy technology. Representations of renewable energy technologies shifted from illustrative depictions of experts with actual RETs toward symbolic images of lay people with renewable energy especially within energy company advertisements. Objectifying wind as a symbol of renewable energy per se may mitigate against greater public awareness of alternative renewable energy sources. Whilst there are a variety of image formats that can be used to communicate about renewable energy policy e.g. cartoons, photographs, diagrams, each is anchored to a particular domain e.g. cartoons with political satire. This has implications for promoting public engagement with renewable energy policy and practise.

Keywords: *carbon emissions, renewable energy, renewable energy, wind turbines*

Essential role of consciousness in control of cognitive processing in cognitive system theory

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Human consciousness, the relationship between the mind and the brain, and the nature of knowledge all await fundamental new insight before a scientific account of human cognition can be settled. To this end I have sought to sketch some significant new concepts that have emerged from fivefold axiomatic analysis of this very complex domain, particularly in relation to cognition itself, and to the nature of mind-brain interaction. In a tightly interlocking and nested theoretical framework, diverse evidence converges to a single unequivocal conclusion about the nature and role of consciousness in human cognition. Consciousness, in its richly varied forms, invariably is directly and intimately

engaged in cognitive processes, because such processes invariably require some means of control: consciousness provides the means of that control; consciousness is that control. This paper will outline the functional contribution of consciousness to cognitive processing, and provide an operational elucidation, together with supporting mechanisms linked to specific brain activity, to explain how cognitive processing develops through major transitional phases as each individual matures. In particular, basic human cognition, at first similar to the processing of other mammals, is shown to respond to an exogenous form of control vehicle whose remarkable efficacy leads to the introduction of new kinds of sequentiated and punctuated cognition. The major survival benefit of this elaborated cognitive competence is to catalyse the introduction of deliberate navigational tasking associated with the self-model to complement a default and reactively instrumental form of challenge response. At each stage of advanced cognitive processing, it is the emerging flexibility of new kinds of conscious control over cognition that lead each transition. The ultimate transition to self-conscious control is formulated upon a previously un-described form of internal perspective-taking over many forms of knowledge, which serves in the case of the self-model to afford a particular two-dimensional field of control over navigational tasking which subsumes simpler forms of conscious control. A simple heuristic is identified whereby the operational self-model systematically invests in the behavioral repertoire subserving increasingly intelligent performance.

Keywords: *cognitive system theory, consciousness, cognitive processing, control*

Evaluating the effect of didactic versus experiential intercultural training on the intercultural competence of university students

BEHRND, V. (Dresden University of Technology)

Universities sometimes provide language classes and area studies which are didactic instead of experiential intercultural training. We assumed that the effect of area studies in the

combination with language classes equals the effect of didactic intercultural training and that didactic and experiential intercultural training foster intercultural competence. We measured intercultural competence before and after experiential intercultural training with university students that already had received didactic training, plus another experiential group that had not received didactic training, and a control group. In study one, intercultural competence was measured on the behavioral level of evaluation with an instrument consisting of critical incidents in the sub-domains individual, social, and strategic intercultural competence, and the use of problem solving. Study two measured cognitive, affective, and behavioural intercultural competence by a theory-based questionnaire on the learning level of evaluation. An impact of the didactic preparation was found for cognitive intercultural competence in the second study. The theory-based questionnaire on the learning level of evaluation seems to be able to detect the competencies that can be developed by didactic intercultural training. The experiential training had a significant influence on individual, social, and strategic intercultural competence, and on problem solving in both experiential training groups in study one and on affective and behavioural competence in study two. The pre-post differences and their tendency to become significant were higher in the group with didactic preparation. We conclude that experiential training does foster intercultural competence and that didactic intercultural training should be supplemented by experiential intercultural training.

Keywords: *didactic intercultural training, experiential intercultural training, university students, problem-solving*

Evaluating the effectiveness of a counselling service utilising online technologies

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This prospective pilot-study explores the effectiveness of an Australian counselling service

for people with depression, utilising online technologies. The study seeks to: 1) evaluate the effectiveness of the counselling processes utilising online technologies, and 2) evaluate the technologies employed to facilitate counselling. Eligible clients and the counselling team are invited to participate, with a minimum of 20 pairs intended for inclusion. Participants will engage in eight counselling sessions incorporating synchronous and asynchronous dialogue. A mixed method collection of data at pre- and post-counselling will be employed, including psychometric assessments and client and counsellor evaluative feedback forms. The clinical efficacy of the counselling processes will be evaluated at pre- and post-counselling using the World Health Organization's Major Depression Index and Wellbeing scales. The therapeutic efficacy will be evaluated with regard to the working relationships, goal achievement, coping-skills, and self-esteem. Counselling through the provision of online technologies is predicted to be both clinically and therapeutically efficacious. The potential of the technologies to facilitate the counselling will also be explored. It is predicted that the technologies employed will be effective means of facilitating counselling. Findings of the study will be used to inform best practice, improve services, and provide a foundation for future research on Internet-based counselling efficacy.

Keywords: *perceptions, counselling, depression, online technologies*

Evaluation of the telephone cognitive behavioural therapy component of the Australian access to allied psychological services (ATAPS) projects

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The Access to Allied Psychological Services (ATAPS) projects, implemented by Divisions of General Practice, enable general practitioners (GPs) to refer consumers with high prevalence disorders (e.g., depression and anxiety) to allied health professionals for up to 12 (or 18 in

exceptional circumstances) sessions of mental health care. Interventions are evidence-based, focused psychological strategies and cognitive behavioural therapy. In July 2008, the Department of Health and Ageing provided new funding for a trial of telephone-cognitive behavioural therapy (CBT) to 22 rural and remote Divisions of General Practice under the existing ATAPS model. The trial was introduced as a means to assist consumers to overcome geographical and other access barriers. This presentation will describe the evaluation findings of the trial. Data sources include a web-based minimum data set which collects consumer- and session- based data on the projects. Quantitative and qualitative data from and purpose designed interviews with project officers and providers also inform the evaluation. Uptake of the telephone-CBT trial is underestimated by the minimum data set. Telephone sessions are being delivered more widely across the ATAPS projects and not just within the T-CBT pilot. The majority of consumers are females, aged around 40 years, and are on low incomes. The majority of consumers are diagnosed with depressive or anxiety disorders. The majority of sessions are an hour in duration, with an average number of four sessions delivered per consumer. Despite a general consensus among stakeholders that face-to-face treatment is preferred, it is acknowledged that the telephone-CBT modality is particularly valuable for consumers for whom no other option exists. Accordingly, Divisions are keen for the service to continue.

Keywords: *cognitive behavioural therapy, access to allied psychological services, telephone sessions*

Evaluation of treatments provided by clinical psychology interns using videoconferencing

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The aim of the study was to evaluate the effectiveness of psychological treatment, delivered via videoconferencing by clinical interns, for the two of the most prevalent mental health conditions in Australia: anxiety

and depression. A noncurrent, multiple baseline design across subjects and settings was used. Six patients suffering from anxiety and/or depression were referred to a university psychology clinic and received six sessions of treatment via videoconferencing or face-to-face therapy. A number of treatment outcome and treatment process measures were used. Continuous data measuring subjective well-being was analysed using a single case, time-series simulation modelling methodology. Individual outcome measure scores, covering the domains of symptomology (DASS-42) and life functioning (OQ-45), were evaluated for meaningful change using a two-step criterion method. 100% of videoconferencing participants achieved a significant improvement in subjective well-being from baseline to follow-up. In addition, 66% of participants showed a clinically significant and reliable reduction in self-report scores on symptoms of depression and/or anxiety. 66% of participants also showed a clinically significant and statistically reliable reduction in self-report scores on disturbance of life functioning. These outcomes were commensurate with those of participants receiving face-to-face treatment. Clinical psychology interns can deliver effective treatment via videoconferencing with equivalence to face-to-face therapy. The use of videoconferencing as a treatment modality and delivered via university clinics has potential training and public health benefits

Keywords: *psychological treatment, videoconferencing, anxiety, depression, subjective well-being*

Evaluation of yoga as a mind body approach for certain ailments

NITHYANANDAM, L. (Department of Ageing, Disability & Home Care (DADHC))

Dissatisfied with modern medicine, many clients are turning to alternative and complementary therapies, especially mind body approaches, discovering that they receive a more successful and satisfying experience in these. In this endeavour, Yoga, an ancient mind body system that serves both as a preventative and a cure, came into the limelight. However, the scope of

this system has not been really scientifically exploited. This study is an attempt to investigate the Therapeutic role of Yoga for various disorders. It specifically purports to answer the following research questions. (1) Is Yoga effective as a therapy for various ailments? (2) If so, for which specific ailments? (3) Is it effective as a supportive Complementary Therapy or as a stand-alone Alternative Therapy or Both? (4) Is its effectiveness independent or dependent on the number of associated minor symptoms? 88 patients with a clinical diagnosis did a subjective rating of their clinical symptoms for a period of 2 months to establish a baseline in this quasi experimental design so as to serve as control. After that, they were given Yoga training for a period of 3 months and evaluations done each month, were considered for the study. To answer the Research questions the patients were grouped under different categories and a Before and After Experimental Design with repeated measures was used. The results showed that Yoga has been effective in improving the health status by way of reported reduction in symptoms. Of the 13 clinical conditions considered, Yoga had been effective for 10 clinical conditions within a period of 3 months. The study also showed that it can function as a Complementary therapy as well as can also be an Alternate system based on the clinical condition. Finally its effectiveness is independent of the number of symptoms a person has. Yoga is a potent therapeutic tool for various ailments as the patients are proactive in their own healing.

Keywords: *yoga, mind body system, therapy, ailments, alternative therapy*

Evidence of impaired event-based prospective memory in clinical obsessive compulsive checking

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Based on their work with subclinical OCD checking Cuttler and Graf (2009) suggested that checking may develop to compensate for prospective memory failures. This study examined prospective memory performance,

confidence in memory, and subjective complaints about prospective and retrospective memory in a sample with clinical OCD checking. A group with OCD checking ($n=26$) was compared to a matched control group ($n=26$) on a time-based and an event-based prospective memory test, memory confidence ratings, and scores on a measure of subjective memory complaints. The OCD group performed worse than controls on the event-based prospective memory task. There was no difference between the groups in subjective complaints about memory. The OCD group was more confident on both the event-based task and the time-based task. Cuttler and Graf (2009) argued that checking is a consequence of poor prospective memory coupled with awareness of prospective memory failures and concern about these failures. The present study found no evidence of more complaints about either prospective or retrospective memory in the past six months among OCD checkers compared to controls. In fact, checkers expressed greater confidence in their event-based prospective memory than controls and predicted that they would be more accurate on the time-based prospective memory task. This latter finding appeared to be due to the availability of an extrinsic checking strategy for ensuring success. It is possible that concern about prospective memory failures is important in the early development of checking compulsions, but that, over time, checking becomes a habitual (and successful) strategy for avoiding prospective memory failures. This explanation accounts for the present findings of (a) no deficit on the time-based prospective memory task where the OCD group were checking more often in the 10 minutes before the response was required and performance was no worse than that of controls; and (b) no difference between the groups in complaints about prospective memory in the last six months. Further research assessing both subjective memory performance and the strategies understood to support memory is needed to clarify the contribution of prospective memory to OCD checking.

Keywords: *memory impairments, obsessive compulsive disorder*

Examining the psychometric properties of the restraint scale (RS-10) among Hong Kong Chinese adolescents

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The Revised Restraint Scale (RS-10; Herman, & Polivy, 1980) is a widely used measure for dieting tendency. Ample previous studies have examined the factor structure of the RS-10. However, there is still no agreement on its dimensionality and the factorial assignment of its items. This study aims to evaluate the factor structure and psychometric properties of the 10-item RS-10 for Hong Kong Chinese adolescents using exploratory (EFA) and confirmatory factor analysis (CFA). A total of 909 adolescents aged between 13 and 22 years (55.3% boys) completed an anthropometric (height and weight) datasheet, the RS-10, and the 26-item Eating Attitudes Test (EAT-26; Garner, Olmsted, Bohr, & Garfinkle, 1982). For cross-validity, the sample were randomly divided into two groups: one group for the EFA (S1: $N=454$) and the other group for the CFA (S2: $N=455$). Acceptable levels of internal consistency were observed for the total score of the RS-10 ($\alpha=.71$). Results of EFA revealed a three-factor solution, with interrelated concern for dieting, weight fluctuations, and food preoccupation factors in the S1. CFAs were then computed in the S2 comparing the three-factor model identified in S1 with other proposed models, which included the original Herman and Polivy's (1975) ten-item two-factor model and van Strien et al.'s (2002) eight-item two-factor model. CFA model comparison supported that the exploratively obtained three-factor model from S1 provided the best fit to the data. Multigroup CFAs suggested the three-factor model is stable across genders, age groups, and weight statuses. The RS-10 also demonstrated good convergent validity, as suggested by its moderate correlations with the factors of fat concern and dieting ($r=.48$) and food preoccupation ($r=.36$) of the EAT-26 obtained previously in Chinese samples (Lee, & Lee, 1999). The factor structure of the RS-10 among Chinese adolescents is different from those obtained in previous studies with western samples. Nevertheless, findings evidence the RS-10 is a reliable and valid measurement of restraint eating for Chinese adolescents

Keywords: *revised restraint scale, adolescents, dieting tendency*

Examining the role of personality factors and perceptions of the school as a learning organisation on workplace learning among teachers

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YAHYA, K. (Universiti Utara Malaysia)

The study investigates the contribution of the Big Five personality factors (neuroticism, extraversion, openness, agreeableness and conscientiousness) and teachers' perceptions of the school as a learning organization towards the teachers' engagement in informal workplace learning activities. A structural model based on Kurt Lewin's Field Theory was proposed to explain how a person (in this case represented by personality factors) relates to his or her environment (or how one perceives the school as a learning organization), and thus, influence one's behavior in terms of engaging themselves in informal workplace learning activities. Sample involved a total of 400 schoolteachers who were selected through a multistage cluster analysis sampling procedure. The data analysis involved an adoption of the two-step procedure—the analysis of the overall measurement model through confirmatory factor analysis (CFA), followed by the analysis of the structural equation model (SEM). Results of the disattenuated correlations indicated that all five personality factors are significantly correlated with teachers' perceptions of the school as a learning organization. Besides that, three of five personality factors (extraversion, openness and conscientiousness), and teachers' perceptions of the school as a learning organization significantly influence teachers' engagement in workplace learning activities. Both the measurement model and the postulated structural model are acceptably fit models based a few fitness indexes (TLI & CFI values of more than .90; RMSEA & RMR values of less than .08). The findings support the reciprocal relationships between person (personality factors) and his or her environment (perceptions of the school as a learning organization), which influence his or her behaviour (engaging in workplace learning activities), as theoretically assumed in Lewin's

Field Theory. The discussion focuses on the importance of highlighting personality factors and perceptions of the school as a learning organization as antecedents of workplace learning with regard to the use of personality as a selection tool and the adaptation of the learning organization concept in school as to enhance the practice of continuous professional development among teachers

Keywords: *big five model of personality, teachers, school, learning activities*

Examining the validity of driver prototypes using driving-specific measures of personality and coping

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This research examines the validity of using driving-specific measures of personality and coping to develop driver prototypes. Previous research has used the Five-factor Model (FFM) of personality to classify drivers into three common configurations: resilient drivers, over-controlled drivers and under-controlled drivers. Self-report data from drivers were analysed using cluster analysis in order to determine whether a similar set of patterns emerged when driving-specific measures were used and whether these patterns were linked to driving behaviour and accidents. The 402 participants (323 females; 79 males) were mainly first to third year psychology students. The Driver Stress Inventory (DSI; Matthews, Desmond, Joyner, Carcary, & Gilliland, 1997) measured the following characteristics: Aggression, Hazard Monitoring, Thrill Seeking, Dislike of Driving, and Fatigue Proneness. The Driver Coping Questionnaire (DCQ; Matthews, et al., 1997) measured confrontive coping, task-focused coping, emotion-focused coping, reappraisal, and avoidance. All scales were found to be reliable with coefficient alphas of at least .70. Data were also obtained on the drivers' level of self-reported speeding (measured using six items with an alpha of .84), their number of near misses in the previous six months (one item), and their number of accidents in the last six months (one item). A two-step clustering procedure produced a result with three clusters in the solution. Cluster 1 ($N = 152$) was defined

by more maladaptive coping (higher confrontive, lower task-focused and lower reappraisal) and greater aggression and thrill-seeking. Cluster 2 ($N = 150$) was defined by more adaptive coping (lower confrontive, higher task-focused and higher reappraisal), lower aggression and greater hazard monitoring. The third cluster ($N = 98$) was defined by more moderate scores on the coping scales (apart from a much greater level of emotion-focused coping), higher dislike of driving, and higher fatigue proneness. Validation against the three outcome measures showed that cluster 2 reported significantly less self-reported speeding than cluster 3 which was significantly less than cluster 1. Cluster 2 also reported significantly smaller number of near misses than clusters 2 and 3. Cluster 2 reported significantly fewer accidents than cluster 3. The cluster analysis confirmed that three subtypes of drivers can be identified from driver-specific measures of personality and coping. These subtypes differ in their driving behaviour with one cluster being linked with better driving outcomes (cluster 2) while clusters 3 and 1 were most at risk of adverse outcomes. These clusters may also respond differently to road safety messages particularly as cluster 3 expressed a strong dislike of driving and greater emotional exhaustion from driving.

Keywords: *personality, coping, driver prototypes, big five model of personality*

Executive function development and stress effects on driving performance: Preliminary findings from a young adult sample

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Driving is a complex task requiring the integration of several cognitive 'executive' functions which involve brain dopaminergic pathways and are still developing in young adults. Developmental impairments in executive function associated with adolescence could potentially contribute to the over-representation of young people in traffic accidents. Stress affects brain dopamine activity

and moderates effects of dopaminergic genes on executive function. This study aimed to examine the interactive contributions of psychosocial stress, physiological stress response, and executive function development/impairment to young adults' driving behaviour in a driving simulator. 40 healthy young adult drivers were randomly allocated to either an acute stress or relaxation induction condition and were tested individually. Participants completed four computerized performance-based measures of executive function and completed self-report measures of their chronic stress exposure (Chronic Stress Scale) and driving behaviour (Driver Behaviour Questionnaire) prior to undergoing the induction, followed by a 25 minute driving simulator session. Pre-induction, post-induction and post-simulator samples of saliva were collected for cortisol analysis as an index of physiological stress response. Several measures of driving performance (e.g., lane control, speed and speed variability, braking, steering control and hand motor activity) and participants' physiological stress response (change pre to post-induction) will be analysed as a function of the acute stress manipulation (stress vs. relaxation), chronic stress exposure, and executive function performance (lower vs. higher scores based on a median split). Preliminary findings will be presented. Findings will help to elucidate the nature of the relationship between executive function deficits (in this study primarily due to continuing development in adolescence and young adulthood) and psychosocial stress with driving performance, and highlight the impact of individual differences in physiological stress reactivity. Increased understanding of the influence of these multiple factors may lead to the development of more customised education, prevention and treatment/intervention programs for reducing risk of driving-related accidents and injuries in young people.

Keywords: *driving behaviour, executive function, young people, stress*

Executive functions, attention and juvenile delinquency

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The aim of this study is elucidated whether juvenile delinquents have poorer executive functioning in inhibition, flexibility, and attention, than control adolescents. Seventy-five Mexican teenagers participated in a study. The total sample was divided into three groups, one consisting of minors institutionalized by a juvenile court for serious offenses ($N = 24$), another reported by antisocial behavior ($N = 24$) and a control group from the general population ($N = 27$) that was matched by sex, age and schooling to the juvenile court group. Demographic variables were considered and executive functions were assessed by means of the Wisconsin Card Sorting Test, and the Shifting Criteria Stroop Test- a modified version of the Stroop test- and the Continuous Performance test. An ANOVA (GLM procedure) was conducted to compare the three groups: the control group, the juveniles with serious offenses, and the juveniles with statutory offenses. Results showed means differences in some tasks of the Wisconsin test between the institutionalized adolescents and the control group. There were no significant differences in the STROOP test between the control group and the delinquent group. However, significant differences in inhibitory tasks were found between juveniles with serious and statutory offenses. Differences were also found in some indicators of selective and sustained attention, and tonic and phasic alertness, between the control group and the delinquent minors. Results are discussed in regard to minors' inability to respond adequately to the social environment, which results from neuropsychological impairment.

Keywords: *juvenile delinquents, executive function, teenagers, Wisconsin Card Sorting Test,, neuropsychological impairment*

Experienced sexism influences the extent to which male dental students share the values of their organization

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The understanding of university students, especially in programs with clinical practice, isn't covered by classical educational psychology and will benefit from a Work-environment approach.

In a previous study we found that the extents to which dental students share the values of their organization (SV) influence their perceived justice (PJ). In this study we investigate how (SV) is influenced by gender and experienced sexism (Sexism). We hypothesize that Sexism will negatively influence SV. A web-survey was distributed to all ($N = 850$) Swedish dental students of which 50 percent answered the survey, a percentage in line with corresponding Swedish surveys. A SEM analysis was conducted on the data (Chi-square 582,473; $df = 176$; $p > .000$; Normed Chi-square 3,310; RMSEA .085). Our analysis shows that Sexism influences SV negatively, (-.27 for men; -.14 for women) but hardly changes the extent to which SV influences PJ (model without Sexism .56 for men; .43 for women, model with Sexism .53 for men; .42 for women, gender difference significant). However, the influence from Sexism on SV is not significant for Women ($p = .103$). Our results indicate that women's awareness of sexism is not necessarily related to their values, or what they interpret as the values of their organization, but can rather be related to what they expect of their lives as women. On the other hand, in our experience, men who become aware of sexism tend to do so in relation to changing their awareness of feminist issues and/or adapt some feminist values. It has been suggested that male doctors become more aware of gender issues once the amount of female doctors reaches or surpasses 50 percent, and it is possible that the 70/30 ratio of the Swedish dental programs have contributed to the feminist awareness of male dental students in a similar fashion.

Keywords: *university students, dental students, shared values, perceived justice, sexism*

Experiences and needs of siblings of illicit drug users in Western Australia

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Siblings can play key roles in an adult's life. Sibling relationships may be a source of support, alliance, advice, learning, frustration, competition, and protection. The impact of having a family member who has an illegal drug use problem appears to have never been investigated solely from the point of view of a

sibling. This research aimed to explore the life experiences and needs of adults with siblings who have an illegal drug use problem. The exploratory nature of this research necessitated a qualitative approach. Therefore this study used a phenomenological approach to investigate how adult siblings constructed their life world and shared meaning in relation to the experience of having a sibling with an illegal drug use problem. Therefore themes related to the lived experiences and needs of this population were identified. Using thematic analysis several themes related to stress and distress, coping, support systems, and positive impacts, such as resilience and growth, were identified. Participants were likely to feel distress both from direct experiences with their sibling and from the impact on parents and other family members. Common experiences included a cycle of engagement and support of the user followed by detachment and bounded relationships. Participants were also more likely to find support in partners and friends rather than seeking treatment and support from Alcohol and Other Drug Services. The findings of this research inform the understanding of the quality and nature of sibling bonds during times of distress. Results of this research indicated that siblings feel distress that is comparable to a parent or child of an illicit drug user. However, siblings appear to feel they have more freedom to detach from the relationship if needed. These findings also inform clinical practice in terms of the psychological needs of this population, such as issues with adjustment, grief and loss, stress, general coping, and the impact of often protracted disruptive life experiences as a result of having a sibling with an illegal drug use problem.

Keywords: *siblings, illicit drug use, stress, coping, support systems*

Experimental group session for cross-cultural social skills learning for international students in Japan from the social-clinical psychological perspective

TANAKA, T. (Okayama University)

The aim of the present study was to develop a cross-cultural social skills learning session for

international students in Japan, a small group session was conducted based on cognitive and behavioral learning techniques, such as role plays. Ten international graduate students who studied at a Japanese university and were interested in learning about Japanese culture joined the two-day session. Five Japanese graduate students who were interested in cross-cultural education also joined the session as helpers of learning. The international students learned cognitive and behavioral social skills that focused on culture-specific behaviors. In the first session, self-assessment about cross-cultural social skills performance was done and target learning behaviors were selected. During the session, they learned about Japanese hesitation, Japanese drinking “communication”, visiting behavior at Japanese homes and indirect refusals. Each session included lectures about Japanese behavior patterns and cultural backgrounds. They learned about situations through target behaviors, situational role plays, feedback, a second role play and finally discussion. Participants reported more interest in Japanese cultural behaviors increased self-confidence and greater motivation to experience cross-cultural contacts. As a result of the evaluation to their role play in video tape, their improving of the performance had been shown. It is suggested that cognitive-behavioral culture learning in this session would enhance their social-cultural adjustment during their studying abroad.

Keywords: *cross-cultural, social skills, cognitive learning techniques, behavioral learning techniques, Japan*

Explaining patient involvement in chronic disease self-management: Five discourses of decision-making

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The national review of chronic disease management in Australia is in a crucial period of rethinking health care and patient involvement to address the increasing rates of chronic diseases, particularly obesity and type 2 diabetes. In this critical review of national interventions and cognitive approaches to

enhancing patient self-management evidence clearly demonstrates that interventions to date have had limited effectiveness. The aim of this research was to develop a new approach to the explanation of chronic disease self-management within the context of the practitioner-patient consultation to increase the capacity for health behaviour change. Three major methods of analyses were conducted: a critical review of the international literature, analysis of in-depth interview data, and clinical observations. A typical example of a patient with chronic disease was selected to illustrate in detail the capacity of a new theoretical framework applied to self-management. Based on three forms of evidence, being theory, research interviews and clinical observations, five major ways in which patients with chronic disease make decisions about self-management were identified. The case study of 'Alan', a patient with type 2 diabetes, is examined using discourse theory to illustrate the potential practical application of this new explanation. It is concluded that to advocate for patient involvement without a serious reconsideration of the underlying barriers is likely to result in more of the same; limited health behaviour change on the part of patients. The implications of a discourse approach to chronic disease self-management are discussed in terms of its application in primary health care as a generic decision-making tool. The development of understanding patient involvement in chronic disease self-management is proposed a move forward in that it addresses both the medical and psychosocial aspects of patients' chronic diseases in primary health care.

Keywords: *chronic disease, national interventions, patient self-management, effectiveness, behaviour change*

Exploration of early maladaptive schema and attachment domains in sexual offenders

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The present study explored early maladaptive schema (EMSs) and attachment domains among sexual offenders. This group was compared with normal individuals. The study examined the hypothesis that "sexual offenders in comparison with normal individuals have significantly higher score averages in EMSs and attachment domains." 34 sexual offenders kept in the Central Prison of Mashhad city were randomly selected. 34 other subjects, normal individuals, matched with them on variables of age, marital status, occupation status and literacy level. Normal individuals were selected in accordance to GSI score in SCL-90-R. Subjects completed Young Schema Questionnaire-Short Form (YSQ-SF) and Close Relationships-Revised (ECR-R). Data was analyzed by dependent t test. The results revealed that when compared with the normal group, sexual offenders had a significantly higher score average in early maladaptive schema ($P < 0/05$). In the clinical group, highest scores were for the vulnerability to harm and illness, subjugation, defectiveness/shame, dependence/incompetence, entitlement/grandiosity early maladaptive schemas and disconnection and rejection, impaired autonomy and performance schema domain. No significant results were observed in Self-sacrifice maladaptive schema ($P > 0/05$). Also, the results revealed that, when compared with the normal group, rapists had a significantly higher score average in the attachment anxiety domain. Between the two groups, there were no significant differences on attachment avoidant domain. In conclusion, high scores in early maladaptive schema and attachment anxiety domains, specifically in disconnection and rejection and impaired autonomy and performance schema domains, can lead to sexual crimes and to sexual offenses behaviors and rape

Keywords: *sexual abuse, attachment domain, sexual offences, early maladaptive schema, schema domain*

Exploring organisational emotional intelligence and its relationship to employee attitudes

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Following on from research highlighting the importance of emotional intelligence and emotions for successful leadership and performance in organisations (Goleman, Boyatzis and McKee, 2002; Fineman, 1993), this study examines the relationship between perceptions of organisational emotional intelligence (OEI) and attitudes such as trust, commitment and advocacy amongst employees. Although Goleman (1998) hinted at the importance of collective emotional intelligence in realising intellectual capital and determining performance over time, it was Higgs and Dulewicz (2002) who suggested that organisations can have an actual climate for emotional intelligence, as a result of the behaviours and practices that occur within them. Previous research in organisational behaviour generally confirms the significant relationship between individual perceptions of organisational climate, also known as psychological climate, and evaluative criteria such as employee attitudes (James & James, 1989; Parker et al., 2003). This study uses a new Organisational Emotional Intelligence Questionnaire (OEIQ) (author's names excluded for purposes of blind review), based on previous work by Higgs and Dulewicz (2002), to measure employee perceptions of organisational emotional intelligence on seven dimensions, namely: Self Awareness, Emotional Resilience, Motivation, Interpersonal Sensitivity, Influence, Intuitiveness and Conscientiousness. In addition, the study uses measures of employee trust, commitment and advocacy from previous research in corporate reputation (MacMillan et al., 2004; Hillenbrand, 2007). The study reports data on a quantitative cross-sectional research design (n=100) carried out in two organisations: a UK-based multinational services company and an Australian NGO operating in the field of public health. The results show that organisational emotional intelligence has a strong positive correlation with trust, commitment and advocacy amongst employees, with trust acting as a partial mediator. The major drivers of employee attitudes were found to be Interpersonal Sensitivity, Influence and Motivation with Self Awareness, Emotional

Resilience, Intuition and Conscientiousness playing a relatively minor role. The study shows that organisations which develop a more emotionally intelligent climate, particularly around allowing employees to be involved in strategy and decision-making and to communicate with management, will experience higher morale and increased behavioural support, namely commitment and advocacy, amongst their staff.

Keywords: *emotional intelligence, leadership, performance, perceptions, attitudes*

Extending to groups: The effects of attitude bases and affective-cognitive consistency on the attitude-behavior relation

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Recently social psychologists began to focus on identifying properties of attitudes that moderated the attitude-behavior relationship. Of the investigated attitudinal properties, two extensively researched constructs are attitude bases and affective-cognitive consistency (ACC). The current set of three studies referred to the supervised groups' attitudes and behaviors toward the supervising groups and provided initial tests of the effects of attitude bases, ACC, and their interaction on the attitude-behavior relationship in the context of both preexisting and new attitudes at the group level. Study One collected data at the group level measured the undergraduates' preexisting attitudes and supportive behaviors in the lab. Study Two manipulated the participant groups as the supervised groups and focused on the supervised groups and supervising groups with the direct interests. The supervised groups' attitudes and supportive behaviors toward the supervising groups were formed and measured in the lab. Study Three collected the data at the individual level and attained the public's attitudes and opposed behaviors toward the central government and the local government in a questionnaire in order to test the generalization of the findings gotten in the lab. Study One suggested that attitude-behavior

consistency was higher when the attitudes had an affective focus. Study Two demonstrated that when the attitudes had a cognitive focus, a positive correlation existed between ACC and attitude-behavior consistency, while for the affective focus attitudes, ACC did not influence attitude-behavior consistency. Study Three showed that the results about public's attitudes toward the central government were close to the findings from study 1 which involved no direct interests; whereas for the public's attitudes toward the local government, the results were similar to those in Study Two which dealt with some direct interests. The present research proved that for the attitudes and behaviors with low personal relevance, only attitude bases had impacts on the attitude-behavior relation, suggesting that the affective focus attitudes predicted the following behaviors better than the cognitive focus attitudes. However, for the attitudes and behaviors with high personal relevance, the interaction between attitude bases and ACC influenced the attitude-behavior consistency so that the cognitive focus attitudes with high ACC predicted the behaviors better than those with low ACC, while the relations between affective focus attitudes and behaviors were not influenced by ACC.

Keywords: *attitude-behavior relationship, affective-cognitive consistency, attitudes*

Facial emotion processing in individuals with autistic disorder and Asperger's disorder

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Autistic Disorder and Asperger's Disorder are characterised by difficulties with social interaction. Yet it is still unclear if such difficulties are related to deficits in emotion processing. This project examined facial emotion discrimination, facial feature discrimination, and the discrimination of complex visual stimuli in individuals with Autistic Disorder and Asperger's Disorder. In addition, this study attempted to address several methodological issues raised in previous research into facial emotion processing in Autistic Disorder and Asperger's Disorder. Boys aged 9-16 years were recruited for

participation. Individuals with Autistic Disorder were matched with individuals with Intellectual Disability on age, gender, and VIQ. Similarly, individuals with Asperger's Disorder were matched with typically developing individuals on age, gender and VIQ. Participants were presented with three discrimination tasks: Facial Emotion, Facial Identity and Complex Visual Discrimination (Butterfly). Stimuli were developed so that three discrimination tasks were equivalent in terms of difficulty and did not produce floor or ceiling effects. Participants were asked to decide whether presented pairs of pictures were 'same' or 'different'. Task performance was measured in terms of discriminability, hit rate, false alarm rate, bias and mean response time. There was a trend for individuals with Autistic Disorder to respond faster than individuals with Intellectual Disability and have higher scores of discriminability on the Butterfly task, with performance comparable for the Identity and Emotion tasks. Furthermore, there was a trend for individuals with Asperger's Disorder to yield lower scores of discriminability overall, have a lower hit rate for the Emotion task, and show a higher false alarm rate on the Butterfly and Emotion tasks when compared with typically developing individuals. There were no significant differences between individuals with Asperger's Disorder and individuals with Autistic Disorder on any task measure. There appears to be some differences in the ability of individuals with Autistic Disorder and Asperger's Disorder to process facial emotions when compared with control participants. However, these differences are only approaching significance. This research partially supports the hypothesis of an emotion specific deficit related to Autistic Disorder and Asperger's Disorder that is not a function of overall intellectual functioning.

Keywords: *facial emotion processing, Autism spectrum disorder, Asperger's syndrome*

Facilitating conditions of learning: Stability and relationships of personal constructs and significant others in and out of school

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The aim of the present study was to examine the stability and relationships of personal constructs and significant others in engaging in learning across two waves of data. In order to establish the validity of the scales over two points in time, confirmatory factor analysis was conducted with the longitudinal data of students responses to the Facilitating Conditions Questionnaire (FCQ) from 11 secondary school in Sydney ($N=724$ in Grades 7-9). In order to examine stability over time, a repeated-measures multivariate analysis of variance with the scale scores of Time 1 and Time 2 parallel variables as a with-in subject factor. Eight distinct factors were found for each of two time points (T1 and T2), representing 35 items at T1 and T2 respectively. The factors were (a) parent positive academic climate (Parent Positive), (b) parent negative academic climate (Parent Negative), (c) peer positive academic climate (Peer Positive), (d) peer negative academic climate (Peer Negative), (e) teacher positive academic climate (Teacher); (f) perceived value of schooling (Value), (g) affect toward schooling (Affect), and (h) educational aspiration (Education). It was found that the positive constructs were positively correlated with each other. The Parent and Peer negative constructs were correlated positively with each other but negatively with all the positive constructs. These patterns were consistent across T1 and T2, providing support for the convergent and discriminant validity of the FCQ scales and stability over time. A path model relating all eight constructs over time found no additional significant path other than those for the identical constructs, providing strong support for the stability of the FCQ scales. A path model relating the significant others (parent, peer, and teacher constructs) at T1 to the personal variables at T2 (Value, Affect, Education) found significantly positive paths from Parent Positive to Education, from Peer Positive to Value and Education, and from Teacher to Affect, but a significantly negative path from Parent Negative to Value. Interestingly, the path from Peer Negative to Value was positive, which calls for further investigation. Repeated-measures multivariate analysis of variance found no significant difference between parallel variables at T1 and T2 variables except for Value, which was lower at T2. Overall, the results suggest that facilitating conditions for learning tend to be quite stable

over time, but significant others may have differential impacts on crucial personal factors.

Keywords: *learning, relationships, stability, personal constructs, significant others*

Facilitating the pathways to adolescent mental health services: Enhancing teacher recognition of and referral rates for internalizing problems

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Research has identified that teacher recognition of and referral rates for mental health problems are increase according to the greater severity of students' externalizing problems, but decreases with the severity of internalizing problems, such as anxiety and depression. This is primarily explained by the fact that externalizing problems are disruptive and thus highly visible to teachers, whereas anxiety and depression are less obvious, and may not be noticed until they result in school absenteeism. Consequently, students' problems with anxiety in most cases remain largely "hidden" in the classroom environment. The aim of this study was to investigate the factors contributing to the lower referral rates of internalizing problems and to apply the knowledge gained to facilitate the pathways to mental health services for adolescents experiencing internalizing problems. A community sample of one-hundred-and-four South Australian Year eight to Year 10 high school teachers ($n=78$ females) with a diverse range of teaching experience completed an online survey. The majority of teachers (84%) reported that to a moderate extent or greater, teachers do share a responsibility to identify students with mental health problems. However, 79% "Strongly Agreed" that with regards to internalizing problems, teachers do not possess the skills to adequately fulfill this responsibility. When asked if the pre-service training program they received sufficiently prepared them to recognize internalizing problems in their students, 82% "Strongly Disagreed". It is evident that schools have a crucial role in and are opportunistic environments for supporting the mental health and wellbeing of many young people of school age. The findings from this research indicate that an important factor

contributing to lower referral rates for internalizing problems is the inability of teachers to identify the associated symptoms in their students. Hence, through incorporating a clinically and evidence-based 'mental health toolkit' package outlining student behaviors, speech and expressions that are indicative of internalizing disorders into the pre-service teacher curriculum, teachers-in-training may be more effectively prepared prior to interacting with students. This may ultimately increase referral rates and enhance the capacity of schools to support young people experiencing internalizing problems.

Keywords: *adolescents, mental health services, teachers, referral rates, internalizing difficulties*

Factors associated with depression among aged care residents

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Depression is particularly common among older people living in residential aged care settings. Yet our understanding of factors associated with depression among this population is limited. This study aimed to examine risk factors for depression previously reported in research with community samples, including physical illness, functional disability, and bereavement. The strength of association of depression with these risk factors was compared with individual psychological factors, including religiosity, self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. One hundred aged care residents with normal cognitive function (mean age = 83 years; 80% female) took part in the study. Fifty of the participants had a diagnosis of Major Depressive Disorder (MDD), according to a SCID interview and fifty participants without depression were matched according to facility, gender and age. Assessment measures of risk factor and psychological variables were administered by a clinician in an interview format, with medical data validated by a file review. Risk factor and psychological variables which correlated significant with scores on the 15-item Geriatric

Depression Scale were entered into a multiple regression analysis. The model explained 60% of the variance in depression scores, with the unique predictors being environmental mastery, purpose in life and autonomy. Previously established risk factors such as poor health and disability did not provide unique variance in predicting depression. In order to validate the psychological variables, a discriminant function analysis was conducted. Environmental mastery, purpose in life and autonomy significantly distinguished between individuals with and without a diagnosis of MDD, with 80% accuracy. While limited through the use of a cross-sectional design, this study provides preliminary evidence of the importance of psychological factors in understanding depression in aged care. This suggests a fruitful avenue to investigate in larger prospective follow-up studies, with a goal to reducing the high prevalence of depression among frail elderly people.

Keywords: *depression, aged-care residents, risk factors*

Factors contributing to students' perceptions of fairness following an academic labour dispute

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University labor disputes can be especially difficult for students caught in a tug-of-war between the administration and the striking party. Students affected by an academic labor dispute have reported experiencing distress and adverse academic and financial consequences. A strike can impact the opinions that students hold concerning the groups involved in the work stoppage, the academic institution itself, and the quality of the education received. A recent longitudinal study surveyed the experiences of students of a large Canadian university when their classes were suspended during a 12-week labor dispute by contract faculty and teaching assistants. The present analysis focused on identifying factors contributing to students' perception of fair treatment in the post-strike period, with an emphasis on factors that the

university administration could influence. Hierarchical regression analysis examined the impact of satisfaction with remediation (i.e., changes made to course requirements following the strike) and the availability of faculty assistance in the post-strike period on students' perception of fair treatment. Demographic variables, satisfaction with academic program before and during the strike, availability of faculty assistance before and during the strike, attitudes toward to the strike, student financial concern resulting from the strike, and the degree to which students' plans for graduation, future studies, travel, and employment had been affected were also included in the analysis. Results indicated that pre-strike satisfaction with academic program contributed to a perception of post-strike fairness. The more students' plans had been affected by the strike, the greater the reduction in perceived fairness. Post-strike fairness increased significantly the more students were satisfied with remediation and the more they felt they had a faculty member to turn to following the labor dispute. Interestingly, neither students' levels of financial concern, nor their attitudes toward the strike, predicted perceptions of fairness. Implications of these findings for addressing students' concerns and frustrations in the wake of an academic labour dispute will be discussed.

Keywords: *university labor disputes, strike, students, fairness*

Faith and religious practice as they relate to the wellbeing of older people

WALDEGRAVE, C. (Family Centre Social Policy Research Unit)

The aim of this research program, entitled 'Enhancing Wellbeing in an Ageing Society' (EWAS), is to identify the drivers of wellbeing and quality of life among the older population. Amartya Sen's capabilities approach has formed the conceptual basis of the theoretical framework of this research program (Sen, 1999). Subjective measures that complement Sen's emphasis on the importance of human freedom were included to balance the otherwise objective, material emphasis of the capabilities approach. An extensive survey of a national

random sample of 1680 older New Zealand citizens aged between 65 to 84 years was carried out using computer assisted technology interviewing (CATI). A theory driven approach to the survey questionnaire construction led to the selection of the domains of wellbeing, which included faith and religious practice, were chosen to highlight wellbeing capabilities, functionings, instrumental freedoms and needs. These variables were correlated with a range of subjective wellbeing measures, including the World Values Survey Life Satisfaction Question and satisfaction with their economic standard of living. For those aged 65 to 84 years, significant associations were found between the importance of faith, religious practice and wellbeing. It was found that a higher than expected number of older people considered faith to be either extremely or reasonably important to them. Strong gender and significant cultural differences were found. Other important associations included the importance of faith and: leadership in a church or religious organisation; participating in community or service organisations that help people; involvement in women's organisations; and being members of choir, drama or music societies. This research program provides the first New Zealand results from a large national random sample of older people's attitudes to faith, their frequency of practice and the association with subjective and objective measures of wellbeing. The results demonstrate the high level of involvement by older people in faith and religious activities and a significant association with wellbeing. These finding is particularly important given the general neglect of this area of satisfaction and wellbeing for many older people in ageing research and public policy.

Keywords: *well-being, quality of life, ageing, religious practice, faith*

Family and social factors as predictors of improvement in drug intake, health, and criminal behaviours in adolescents in a residential setting

DUA, J. (Ted Noffs Foundation)

The objective of this research paper is to report on the predictors of drug intake, drug dependence, health, and criminal behavior three months after treatment (Outcome Variables), in adolescents treated in a residential facility run by Ted Noffs Foundation in Sydney, Australia. Ted Noffs Foundation is a residential facility for the treatment of adolescents who have problems caused by alcohol and/or other-drugs, and related mental health problems. At admission, the clients complete questionnaires designed to assess their personal background, health, drug intake, family functioning and criminal behaviors. An Action Plan, a Treatment Plan and a Vocational Educational Assistance Plan are devised for each young person. Young people are assisted/treated by a clinical psychologist, counselors, and alcohol and other-drugs workers. Young people stay in the residential facility for up to three months. Approximately three months after their departure, we contact them again and collect the follow-up information about their drug intake, family functioning, health and criminal behaviours since their departure from Ted Noffs. We used multiple regression analyses to determine the comparative predictive value of length of stay, number of drugs of concern, achievement of set goals, family/social functioning at follow-up and demographic variables in predicting the Outcome Variables. Results showed that young persons, who reported living in a well-functioning family since their departure (Family/Social Functioning variable) showed the best outcomes in terms of substance use, health and criminal behaviours. We further explored the role of family and social variables by dividing the social and family assessment questions into the following categories: association with drug users, availability of social support, extent of social support, conflict with family and friends, family functioning. Multiple regression analyses, that used these five variables in predicting the outcome variables, showed that (a) association with drug users since treatment was the best predictor of drug intake, drug dependence and physical health at follow-up, and (b) conflict with family and friends and association with drug users since treatment were the two major predictors of mental/emotional health. The results of this study provide strong support for training family members and the client in

maintaining a well-functioning family. Results show that young people who continue association with drug users are likely to continue their drug intake and drug dependence.

Keywords: *social support, drug dependence, criminal behavior, health, adolescents*

Family size in northern Sudan: Its economic and cultural associations and its implications for child adjustment

AL- AWAD SHENNAN, A. (University of Gezira)

The present study attempted to explore the determinants of family size in the Sudan and how it contributes to patterns of problem behaviour displayed by Sudanese children. A stratified sample of 300 parents completed demographic and family factors questionnaire and Conners' parent-48 rating scale about their children's behavioural adjustment. The children's classroom teachers have also completed Conners' teacher-39 rating scale. Results indicated that cultural and religious factors were found to be related to the number of children in the Sudanese family. The present results also pointed out, in contrast with Western findings, that large family size did not necessarily lead to behaviour problems. Instead, big family size in our sample mitigated symptoms of psychosomatic problems and anxiety as rated by parents, and unsociability and poor attention as rated by teachers. It was suggested that whether big family size represent a risk or protective factor depends on the developmental processes embedded in the wider sociocultural context in which they exist.

Keywords: *family, Sudan, problem behaviour*

Feedback referent and feedback sign: An examination of their interactive effect on task performance throughout skill acquisition

YEO, G. (University of Western Australia)

Feedback interventions (FIs) are viewed as potential tools for facilitating learning and performance, however, there is confusion

regarding what FIs to use and when to use them. Self-regulation and goal orientation theories were used to generate predictions regarding how the interactive effect of feedback referent and feedback sign unfolds within individuals over time. 139 students performed 60 one-minute trials of an ATC task. Points were awarded according to speed and accuracy. After each block of six trials, participants chose to receive self-referent or normative feedback (points on current block compared to a) own performance on previous block versus b) others' performance on current block). Dummy variables were used to model feedback referent and sign. Task practice was modelled with growth parameters. Total points per trial were used to measure task performance. Data were analysed using multi-level modelling. Self-referent feedback was associated with higher performance on the subsequent trial if it was negative rather than positive; whereas normative feedback was associated with higher performance on the subsequent trial if it was positive rather than negative. This interaction was more pronounced at the end of practice. Early in practice, however, there was a negative effect of self-referent feedback, which was detrimental when compared to self-referent positive feedback and normative negative feedback. This research contributes to the FI literature by examining the combined role of two FI dimensions on task performance over time. This study demonstrates that FIs can have differential effects on task performance depending on the feedback referent, feedback sign and stage of skill acquisition. In general, results suggested that once some skill has been acquired; the most effective FIs are self-referent negative feedback or normative positive feedback. The interpretation and implications of these findings will be discussed within a self-regulatory theoretical framework.

Keywords: feedback, learning, performance, self-regulation, goal orientation

Financial competence: Actual performance and self-report vs third party reports

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The current study was designed to examine the relation between actual competence and third-party reports of competence using the Financial Competence Assessment Inventory (FCAI). It was anticipated that there would be a significant positive relationship between scores on the FCAI-A (people with a cognitive impairment), and scores on the FCAI-B (third party respondents). The sample comprised 112 adults. This included 23 people with acquired brain injury (ABI), 11 with schizophrenia, 10 with dementia, and 12 people with intellectual disability (ID). These groups of people were of interest because they represent people with different types of cognitive impairment, and they are also people who, because of their disability, may have questions raised about their ability to manage their own financial affairs. Fifty six caregivers of those participants with a cognitive impairment also participated in this study. The FCAI was used to assess: (1) "everyday financial abilities," "financial judgment," "estate management," "cognitive functioning related to financial tasks," "debt management," and "support resources"; and (2) four subscales designed to assess: "understanding," "appreciation," "reasoning," and "expressing a choice," in relation to financial abilities. The results suggest moderate agreement between carers and dependents on four of the FCAI subscales, and Total FCAI score, but a lack of agreement between carers and dependents on the "support resources" subscale. Unexpectedly few carers were able to comment on dependent's "debt management" practices. Significant positive relationships were found between the items that comprised "understanding," "appreciation," "reasoning," and "expressing a choice," however, "appreciation" and "expressing a choice" were only moderately related. This finding suggests that there is some disagreement between carer's judgment and the dependent's actual ability to plan and state long term financial goals. In addition, carers rated dependents' abilities lower than dependents scored on items that required dependents to self-report. The discrepancies in rating of financial abilities between third-party respondents and dependents is of some concern as the determination of competence usually involves evidence provided by caregiver or family members of the person whose competence is in

question. It is possible that carers did not know their dependents as well as they thought they did. Alternatively, it is possible that carers may have under-estimated the persons' abilities on the kinds of tasks that they themselves have assumed responsibility for on behalf of their dependent. In addition, carers may tend to report less ability in their dependent in those abilities that tend to fluctuate.

Keywords: *financial competence, actual performance, self-report, third party reports, acquired brain injury*

First clients: Initial professional encounters with psychotherapy clients of counselling psychology students and recent graduates

SIMMONDS, J. (Monash University)

The experience of students training or recently graduated in counselling psychology was researched. Participants were asked about their professional contact with clients and the aspects of training that they drew on. Their experience of supervision and use of other resources was also explored. The aim was to further understand students' and graduates' experiences of field practice, how they used their training, what additional resources they drew on, and their needs. The study had three components in an evolving research design. Participation of first year masters students and graduates supplemented the range of experience of students willing to be interviewed during their first field placement. A total of 32 students and recent graduates participated in interviews, emailed questionnaires (using the same questions as in the face-to-face interviews), and a focus group. Students and recent graduates vividly recalled their first experiences of seeing 'real' clients in a field setting, and their own anxieties and excitement. Systematic thematic analysis indicated that participants experienced supervision as variously immensely supportive and encouraging, to bullying and burdening. Personal self care emerged as an important issue, in that students felt they had been taught about it and knew it was important, but under pressure to 'be

professional', found it difficult to allow themselves sufficient time for it. Postgraduate counselling psychology students and graduates who had 'tried out' some of their training contributed fresh and interesting reflections on their experiences with clients, including on topics such as balancing professionalism and self care, and appropriate levels of responsibility and self determination. They also specified what they found useful in their pre-practicum training and practicum experience and what they thought should be revisited.

Keywords: *students, counselling psychology*

For whom message framing is persuasive? Investigation of goals and temporal framing effects on health information seeking

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An important issue for research concerning health communications is to understand how they might influence intentions and behaviours. This study investigates the influence of message framing according to individual differences in the context of a behavioural intention to come in an information centre on drugs. 705 undergraduates (400 females, 305 males) participated in the experiment. An A4-sized folded paper booklet was handed to participants to complete and collected later at an agreed-upon time. Participants were randomly allocated to experimental condition by pre-packaging the booklets. A 2 (temporal frame) X 2 (regulatory focus: promotion vs. prevention) X 4 (frame: gain vs. loss vs. non gains vs. non losses) between-subjects design was used. All sixteen versions began by describing the information centre on drug. Although the same consequences were presented in each passage, the temporal frame in which the consequences were presented was manipulated (benefits/costs X short/long term), regulatory focus was manipulated in the content of the message (promotion/prevention focused) and gain/loss frame was manipulated in the end of message. Immediately after reading the message, participants completed a thoughts listing task to assess their cognitive responses and then

responded to a series of items to assess constructs specified by the theory of planned behaviour. The final part of the questionnaire contained the 12-item Consideration of future consequences measure and the 18-item prevention/promotion scale. Persuasive impact of messages on behavioral intentions varied across conditions, and appeared as dependent on individual differences as such as framing. Coherence and fit between message and subjects dispositions are suggested as predictors of behavioral intentions to use information centre on drugs. Results demonstrated how multifactorial framing in health communications can enhance persuasiveness of messages. Applied in the context of information seeking, this study has implications for elaborate and evaluate communications in community or public health programs.

Keywords: *health communications, message framing, behavioural intention, information seeking, Persuasion*

Function of apologies for the victims and the third-parties: Empathy, responsibility attribution, and their antecedents

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The principal aim of this study is to compare how the victim and the third-party react to an apology given by a transgressor in a social predicament. Specifically, we examine the cognitive and the emotional processes that take place within the victims and the third-parties by considering responsibility attribution and emotional empathy as potential mediators between apology and forgiveness. In addition, we aim to further scrutinize the psychological mechanism that governs such cognitive and emotional reactions by taking into account morality inference and perceptions of apology elements (e.g. remorse). 357 Japanese undergraduates were presented with a hypothetical transgression vignette manipulated on the perspective (victim or third-party) and the type of account given by the transgressor (no apology, low-sincerity apology, or high-sincerity apology). Then they responded to a set

of questions measuring their responsibility attribution judgments, emotional reactions, moral trait inference, perceived elements of an apology, and forgiveness motivations towards the hypothetical transgressor. The results indicated that emotional empathy and the perceived stability of the transgressor responsibility played a key role in the participants' forgiveness judgments for both the victims and the third-parties; whereas, the apology affected the perceived locus of responsibility only for the third-parties. Furthermore, the study revealed that the perceptions of morality and remorse regarding the transgressor are key factors that determine the empathy and stability judgments. Also the morality inference based on the sincerity of the given apology was shown to moderate the effect of apologies on the third-parties' perceived locus of responsibility. We found out that the apology induces emotional reactions for both the victims and the third-parties, while affecting the responsibility judgments of mainly the third-parties. In addition, our study signified how the judgments on the moral character of the wrongdoer function as a fundamental basis of responsibility judgments, as well as empathic reactions.

Keywords: *victim, apology, empathy, responsibility, forgiveness*

Germans think secondary tasks while driving aren't dangerous at all

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Accident studies find some kind of driver distraction in about 10 to 30% of all crashes (e.g. Stutts, Reinfurt, Staplin, & Rodgman, 2001). However, relatively little is known about how often and when drivers engage in secondary tasks while driving without an accident. Naturalistic driving studies from the USA indicate that drivers engage in secondary tasks in about 30% of their driving time (e.g. Klauer, Neale, Dingus, Ramsey & Sudweeks, 2005). In order to examine the prevalence of distraction in Germany, about 300 drivers were interviewed in a field study immediately after stopping their

vehicle. They were asked to report all secondary tasks during the last 30 minutes of their driving time. Five groups of drivers were examined: (1) Truck drivers at the Autobahn ($N= 90$), (2) car drivers at private trips at the Autobahn ($N= 71$), (3) car drivers at business trips at the Autobahn ($N= 29$), (4) car drivers at private trips in town ($N= 85$), (5) car drivers at business trips in town ($N= 12$). Between these groups the pattern and frequency of engagement in secondary tasks differs. Overall, about 80% of all drivers conducted one to three secondary tasks within the last 30 minutes of their driving. With regard to the duration of these tasks, interactions with passengers lasted longest. Handling clothes and body care was shortest. While subjects judged most tasks as being distracting in general, they were quite convinced that they were only a little distracting for themselves in the specific situation. Thus, drivers seem to believe that they engage in secondary tasks only when it is safe for them. Overall, the results indicate that secondary tasks may pose a serious problem for traffic safety in Germany, too. The face-to-face interview directly after a trip seems to be a cost-effective alternative to naturalistic driving studies.

Keywords: *driver distraction, secondary task*

Giving up on school: Investigating mediating mechanisms between parental support and provision for career counseling and persistence

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The declining persistence of students in academic programs is a current problem faced by tertiary institutions worldwide. For example, approximately 20 to 33% of students in the United States leave university without completing their degree (National Center for Education Statistics, 2005). This trend is even higher in non-western countries such as the Philippines, where 40% of students drop out of university (Commission on Higher Education, 2008). Given these staggering turnover rates, an empirical examination of how to reduce its occurrence is of critical importance. Drawing

upon Social Career Cognitive Theory (Lent, Brown, & Hackett, 1994), we examined how types of contextual support (e.g., parental support and career counseling) influence student persistence in an academic program. In addition, we test the roles of career self-efficacy and career decidedness in mediating the relationship between these types of contextual support and persistence. One hundred and forty-six undergraduate students were surveyed over three measurement periods. To address the issue of common method variance, multiple sources of data were collected (Podsakoff et al., 2003). Aside from self-ratings of self-efficacy and career decidedness, parent ratings of parental support were also collected. Furthermore, archival data from the university's records were obtained as a measure of provision for career counseling and academic program turnover (i.e., non-persistence). Results of structural equation modeling analyses provided support for our hypothesized mediated model. Specifically, Time 1 parent ratings of support and provision for career counseling led to greater Time 2 (6 months after Time 1) career self-efficacy and career decidedness. This, in turn, resulted in Time 3 (18 months after Time 2) persistence (i.e., lower program turnover). Our findings show that both parental support and career counseling uniquely influence persistence, albeit indirectly. Most importantly, we found that career self-efficacy and career decidedness acted as explanatory mediating mechanisms through which these types of contextual support influenced students' persistence in their academic program. A collaborative approach between parents and schools in providing career support and a focus on improving self-efficacy in career counseling interventions are recommended.

Keywords: *university, parental support, career counselling, self-efficacy, persistence*

Globalized work and intelligent working environments: Employees' adaptation to the implementation of new working strategies

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Aim of this paper is to identify the impact of globalized work and new working conditions on employees' psychosocial qualities such as privacy, territoriality, place attachment, sense of belonging, socialization etc. Mobile working, hotelling, hot-desking and home working mirror contemporary aspects of organizational culture, where the permanent working place, private working and stable timetable no longer exist. Intelligent working environments that incorporate technological advances and provide the possibility of the implementation of globalized work and new working strategies create a distributed workplace to which employees have to adapt. A questionnaire survey method using structured questions was chosen to collect data from employees working in two intelligent office buildings in London. The set of questions covered three areas of interest: employees' perception, evaluation and expression of wishes related to their working environment. The questionnaire was distributed to participants from both genders (30 male and 30 female employees) and from various ranks across departments. Descriptive statistics and content analysis were used to analyze gathered data. Results showed that the transformation of working environment and the implementation of new working practices are related to the inability of employees to experience privacy, concentration and place attachment. In addition, results revealed that employees demonstrate signs of deterritorialization towards their working environment, express desire to adopt home working and identify their lack of personal time and social interaction. These findings highlight the loss of workplace identity and point out distributed workplace's insufficiency to cover the psychosocial needs of its users. The working space is becoming a "non space", characterized by liquidity and neutralization, which prevents the growth of social connectivity. This paper invites a discussion about the future consequences of the present working circumstances and the hidden dangers related to the balance between individual and professional activities, personal and public life.

Keywords: *globalized work, intelligent working environments, adaptation, workplace identity*

Goal-performance discrepancies and cognitive effort: A multilevel analysis

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The central concern of this study was the relationship between goal-performance discrepancies (GPD) and effort within an avoidant goal context during the goal setting and goal striving phases of self-regulation. These phases were modelled at two within-person levels of analysis (between-trials or goal setting episodes; and within-trials or in the goal striving phase). Drawing on control theory and social cognitive theory, predictions regarding these relationships were examined in relation to two potential mediators, namely, self-set goal during the goal setting phase and tense arousal during the goal striving phase. 130 participants completed ten, ten-minute trials of an Air Traffic Control task. Participants were required to accept and prevent conflicts between aircraft. Penalty points were accrued for errors, thus their broad goal was avoidant in nature, namely to minimise their penalty points. Individuals set avoidant penalty goals at the beginning of each trial. Measures of tense arousal and effort were obtained via self-report five times within each trial. Results relating to the goal striving phase of self-regulation indicated that when an individual was performing well during a trial, he or she reported expending more effort than when he or she was performing poorly. This finding is inconsistent with control theory predictions that an individual will increase effort when performing poorly as a means to avoid goal failure. As expected, however, tense arousal was positively related to effort. As an individual increased their tense arousal from one time-point to the next within a trial, the more the individual reported expending effort. Thus, GPDs and tense arousal had opposing independent effects on effort. Results relating to the goal-setting phase of self-regulation indicated that the further an individual was away from their undesired penalty goal at the end of a trial (i.e., the better they performed), the more challenging goal they set for the next performance episode. However, GPDs had the opposite effect on effort – the higher the goal success, the lower the effort in the subsequent

performance episode. Self-set goals were not associated with effort. Thus, although goal attainment prompted individuals to set a more challenging goal, they did not appear to match their effort level to their new goal. Follow-up analyses of time and skill acquisition effects did not explain this unexpected result. These findings provide mixed support for social cognitive theory, which predicts that goal attainment motivates individuals to set more challenging goals and increase effort expenditure. Results highlight the importance of examining subjective psychological states across different time points as the GPD to cognitive effort relationship was found to operate differently depending on whether it is examined during the goal setting or goal striving phase of self-regulation.

Keywords: *goal-performance discrepancies (GPD), cognitive effort, social cognitive theory*

Going up or coming down? Differences in the psycho-social determinants of ecstasy use and GHB use

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Ecstasy has been a prevalent club drug for decades, while in the past decade, GHB has been gaining ground. Both substances have their dangers, and although for ecstasy use, recent reviews are starting to map the relevant determinants, for GHB, such research is lacking. Because both drugs are used in the same setting, psycho-social determinants may be similar, and if they are, intervention efforts addressing GHB use could be informed by the evidence base that has accumulated for ecstasy use. On the other hand, both drugs have opposite effects: while ecstasy is a stimulant, GHB is a sedative. The determinants may therefore also be different. The current study compares the determinant configurations of these drugs. An online survey was administered by a virtual interviewer at a virtual dance party. The survey consisted of three data waves. Ecstasy determinants were measured at wave 1, and GHB determinants at wave 2. Self-reported behavior was measured at wave 2 for ecstasy and wave 3 for GHB. Data

was collected for 3169 participants from the club scene. Intention to use strongly predicted subsequent use for both ecstasy ($d=1.3$, $p<.001$) and GHB ($d=2.6$, $p<.001$). For ecstasy, this intention to use was strongly predicted by attitude and injunctive norm (both with $r>.5$, $p<.001$), and moderately by perceived behavioral control and descriptive norm (both with $r>.3$, $p<.0001$). The determinant structure of GHB was different: with the exception of injunctive norm, all determinants were significantly less strongly associated to intention, with medium effect sizes for the difference between the correlations (Q ; all $Qs>.3$, all $ps<.001$). Although intention to use GHB more strongly predicts actual use than is the case for ecstasy, the determinants of ecstasy use more strongly predict intention to use than is the case for GHB. The strong intention-behavior link implies that GHB use can be considered a planned behavior, which is promising from a health promotion perspective. However, at the same time it clearly demonstrates that more needs to be learned in terms of the determinants predicting this intention to use GHB.

Keywords: *ecstasy, drug use, GHB use, intention-behavior link, planned behavior*

Good governance of Thai small and medium sized enterprises

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The purpose of this study was to study good governance in Thai small and medium sized enterprises (SMEs) and to examine the structural relation among psychological factors; leadership, instinct motivation and attitude toward good governance, affecting good governance and success in business. The sample were 435 SMEs entrepreneurs in three types of enterprises comprising of manufacturing, wholesale and retail selling, and providing service enterprises. They were selected by simple random sampling. Instruments for data collection were one questionnaire for biosocial data and 5 measurement tools for leadership, instinct motivation and attitude toward good governance, good governance and success in business. Data were analyzed by Mean, Standard

Deviation, Variance, Correlation and Structural Equation Model. The findings from the study were found that good governance in Thai SMEs had high level including their three factors; the performance on employees, consumers and social and environment, had high level as well. In addition, instinct motivation, attitude toward good governance and success in business also had high level. The structural relation model fitted the empirical data ($\chi^2=510.93$, $df=175$, $p=0.00$, $CFI=0.93$, $GFI=0.90$, $RMSEA=0.07$). In terms of effect size, leadership of entrepreneurs had positive direct effect on attitude toward good governance and good governance at .05 statistic significant level. Their standardized coefficient were .35 and .48 respectively including had positive indirect effect on success in business through attitude toward good governance and good governance. Its standardized coefficient was .16. Besides, Instinct motivation had positive effect on attitude toward good governance, good governance and success in business. Their standardized coefficients were .29, .15 and .25 respectively. Attitude toward good governance had positive effect on good governance. Its standardized coefficient was .35. Moreover, good governance had positive effect on success in business. Its standardized coefficient was .65. According to research results, organizations should promote and develop leadership, instinct motivation and attitude toward good governance to SMEs entrepreneurs by activities such as workshop or case study. Furthermore, they should be supported, promoted and realized in ethics in business through training or activities, for example; to advise by experts or mentors in good governance development, to create the entrepreneur network for knowledge sharing and to publish information data declared that if organizations had high good governance, it could lead to be success in business and economic development in country and global level.

Keywords: *good governance, enterprises, leadership, motivation, business success*

Good vibrations – the effect of playing the drums on violence prevention and social integration among secondary school students

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The aim of this project was to investigate the effect two short-term music-based interventions in secondary schools aimed at violence prevention, social integration, and fostering (creative) conflict resolution strategies. The study is based on research evidence indicating that music is accepted by children of all languages, cultures and religions. Music evokes emotional responses in children. Actively making music and improvising with the use of rhythmic instruments affects mood, communication and the ability to form relationships. Two modern secondary schools based in Southern Germany (Munich) participated in this study. Each school contributed one treatment and one control group (classes). The two treatment groups took part in two week-long interventions focused on making music using rhythmic instruments. The interventions were provided by two music therapists working in collaboration with students and teachers. At the end of the intervention the students performed in front of an audience. The effects of the interventions were measured using standardised questionnaires. Data was collected during one year at five different time points before and after the interventions plus a follow up. The tools used included a rating scale for teachers eliciting their views on the social behaviour and learning behaviour of students. Another questionnaire was used to gather student data on empathy, sociability, aggressive behaviour and aggressive tendencies. The study also included a projective tool, which was used prior to the first intervention and after the second intervention period. The tool consisted of students writing two short stories informed by two pictures. One picture portrayed violence and the other a neutral stimulus. The stories were analysed using a qualitative technique. Finally, interviews were conducted with participating teachers to explore changes in the participating classes. The data analysis is currently being finalised but the outcomes will be ready for presentation at the conference. So far, the analysis indicates a complex set of outcomes with few intended causal effects. Some of the outcomes are contrary to

expectations. For example, among the control groups a sense of community (social integration) was established faster than among the intervention groups. Yet, the sense of community was stronger in the control groups following the two intervention periods. Teachers and students considered making music as equally engaging and exciting. The study outcomes will inform the development of effective and cost-effective social skills training for the use in schools.

Keywords: *music-based interventions, secondary schools, violence prevention, social integration, conflict resolution*

Graduate training and commitment in construction SMEs

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The present research investigated which graduate career development activities implemented by construction organizations are successful. Formal graduate development programs were compared to informal training activities for graduates across construction organizations varying in size and industry sector. The research adopted the philosophy of a traditional program evaluation format within a sequential mixed method structure. The first phase of the research ascertained what training activities are implemented and why, in which "success" was defined in terms of desirable outcomes of development programs. The second phase measured the type and frequency of training activity undertaken by each graduate and compared this with the definition of "success". Both qualitative and quantitative data were collected and analyzed. Phase 1 identified that large construction organizations define "success" as increasing skills and graduate retention. For logistical reasons, Phase 2 focused on measuring potential retention as represented by organizational commitment. No significant correlation was found between the presence of a formal graduate development program and commitment, even though a slight positive trend was reported. Of the individual development activities, job rotation was found to be significantly associated with an increase in affective commitment; multiple interviews

during recruitment were found to be significantly associated with a lower continuance commitment. Large construction companies with sufficient facilities may be encouraged to implement a formal graduate development program with the potential for positive outcomes. However, small construction organizations can achieve an increase in attractive commitment levels without the implementation of such a program. Carrying out multiple interviews and job rotation will achieve an increase in commitment and are not financially prohibitive. The research proposes that these results are not exclusive to the construction industry and that job rotation and multiple interviews should be implemented in other industries such as nursing and teaching.

Keywords: *graduate, career development, success, recruitment, commitment*

Guilt over consumption vs. the healthy wine message: What is accepted by everyday drinkers?

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The media has been quick to promote the health affordance of wine (initiated by the so-called French Paradox), while public health messages tend to focus on the need to reduce alcohol consumption. People get mixed messages about drinking alcohol and its effect on their wellbeing. At least one study has shown an increase in guilt over drinking despite reduction in alcohol consumption in recent years (Messiah et al, 2008). Given the complexity of the relationship between alcohol and wellbeing, different messages and reactions are understandable. We were interested in whether drinkers' motives and beliefs reflected 'acceptance' of the health affordance message for wine and whether there was a differential relationship with the guilt scores on the CAGE questionnaire. We expected wine drinkers to be those most affected by the health affordance message. We were also interested in 'normal' drinkers. The interview questionnaire collected information on motives, beliefs, type of beverage preferred (defined as consumed 90% of the time), and items on attitudes and behaviours related to alcohol

consumption. Over a thousand participants completed a national telephone survey. The acceptance of the health message was modest across the sample, with wine drinkers scoring slightly but significantly higher on 'drinking because it's healthy' than beer or spirits drinkers. There were no differences on the guilt item across preferred beverage, but there were differences for the other CAGE questions with wine drinkers more likely to disagree with statements associated with potential problem drinking. Women were more likely to consume wine exclusively, but less likely to believe it is healthy for them. Drinking red wine, being male and older were variables most related to a high score on health belief. Although there were no differences in guilt across subgroups, male beer drinkers reported a higher perceived need to cut down on drinking. Perceiving wine or other beverages as healthy does not interact with guilt over drinking, but motives and beliefs have a more complex relationship with consumption and perceived need to 'cut down' in a non-clinical sample.

Keywords: *wine, alcohol use, well-being, attitudes, guilt*

Hazardous drinking in young adults: Role of reward and punishment sensitivities, drinking motives, and alcohol outcome expectancies

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The aim was to examine how drinking motives and outcome expectancies mediated the link between more basic personality factors of reward and punishment sensitivity and hazardous drinking in young adults. The study also examined potential gender differences and whether differences in 'hyper-masculine' values held by males influenced the extent to which motives and outcome expectancies and personality factors influenced hazardous drinking. Participants (135 females and 63 males) aged from 18 to 30 years ($M = 22.5$ years) completed an internet-based self-report questionnaire that assessed alcohol use, drinking motives, outcome expectancies, punishment and reward sensitivity and hyper-masculine values.

Results indicated that reward sensitivity predicted hazardous drinking with major mediators of this relationship being positive expectancies, especially assertion; and drinking motives, especially enhancement of positive emotions, but also including social, coping and motives related to intimacy and gaining personal experience; and negative expectancies that alcohol use leads to dependency. While no direct effect was found for punishment sensitivity and hazardous drinking, indirect relationships were found such that young adults who expected more immediate negative outcomes such as negative mood were less likely to drink at hazardous levels. No gender differences were found in the relative importance of variables predicting hazardous drinking, although more males (49%) engaged in hazardous drinking than females (41%). Hyper-masculinity in males was correlated to hazardous drinking levels in order to cope and to enhance cognition, whereas those low in hyper-masculinity were more inclined to drink for sexual enhancement. Implications of results for interventions are discussed. Since hazardous drinkers are aware of the long-term consequences of dependency it is unlikely that shock tactics that emphasize these outcomes will work to reduce drinking, although emphasis on more immediate negative outcomes may. Since young adults drink to enhance positive mood, be sociable, assertive, and to enhance personal experiences and intimacy, one set of interventions needs to foster a general cultural change so that these ends can be met without excessive alcohol use. Other interventions that teach more effective management and coping with life problems would seem necessary for those who use alcohol to cope with emotional distress.

Keywords: *drinking motives, personality factors, young people, hazardous drinking, hyper-masculinity*

Health care and psychosocial situation of patients with a rare disease: The example of 228 patients with Neurofibromatosis type 1 in Germany

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The aim of the current study was to survey psychosocial burden, health care and treatment benefit from the patients' point of view. Neurofibromatosis type 1 (NF-1) is a rare acute disease (incidence 1:3000). To date, there is a lack of studies about the patients' health care and psychosocial situation. In a non-interventional study, a total of 228 adult patients with NF-1 filled in a questionnaire on social situation, clinical data, quality of life, body image, treatment benefit and diverse health care parameters. Different subgroups were compared (e.g. patients with vs. without affected relatives, or patients with vs. without specialist treatment). The participants had a mean age of 44 (+/- 13), 61.7% were female, 74.1% were members of a self-help organization. 37% of the patients stated to be diagnosed with a depressive disorder. 51.3% had long term relationships which is lower than the national average (Germany ~ 62.4%). 11% of the patients older than 27 still lived in their parents' home (Germany ~2.2%). Most patients were treated by general practitioners (67.5%), NF-1 specialists (59.2%) and/or neurologists (43.2%). Patients who were treated by specialists were more satisfied with treatment. They had also higher treatment benefit in areas closely related to the disease, but they did not report more benefit with regard to daily life and personal relationships. 48.3% of the patients had relatives affected by NF-1. These patients had more long-term relationships and more had children. These results indicate that medical care on a high standard can help moderate the disease's symptoms. However, it does not seem beneficial to improve patients' daily life experiences to the same extent. Relatives of those affected by the disease might help them to cope with certain daily life challenges which then lead to better psychosocial integration. In summary, to improve the situation of patients with rare psychosocially burdensome diseases more comprehensively, we suggest that psychologists and physicians work closer together.

Keywords: *psychosocial burden, health care, treatment, rare disease*

Healthy lifestyle patterns among rehabilitation patients: Physical activity as a gateway behavior?

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Physical activity might be a gateway behaviour for an overall healthy lifestyle, including healthy nutrition and non-smoking. Being physically active is associated with psychological resources, such as planning-ability and self-efficacy, which might promote other behaviours as well. Moreover, the stronger a physical activity routine the more resources might be available to invest in other health behaviors. The goal of the study was to assess the prevalence and interrelations of three health behaviors and its social-cognitive determinants in a sample of rehabilitation patients. A sample of 256 patients filled out a computer-based questionnaire assessing three health behaviours (smoking, physical activity, nutrition), stages of change for physical activity, physical activity self-efficacy and habit strength. Multiple linear regression analysis was conducted. Overall, 20.3% of the study participants met recommendations for all three behaviors, 38.3% for at least two of the three health behaviors and 30.1% displayed one health behavior. 8.2% did not reach any health recommendation. Stages of change for physical activity, physical activity self-efficacy and habit strength significantly predicted whether individuals met recommendations in zero, one, two or three behaviors ($p < .01$, $R^2 = .40$). This study documents that different health behaviors tend to cluster among rehabilitation patients. Results indicate that being physically active, having a high level of physical activity self-efficacy and having developed a physical activity routine might promote other health behaviors. This might be explained by transfer effects. Such effects can be targeted in interventions for adopting and maintaining multiple health behaviors.

Keywords: *physical activity, healthy lifestyle, rehabilitation, self-efficacy*

Help-negation for suicidal ideation and other symptoms of psychological distress

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Help-negation refers to the help avoidance or refusal that has been found in samples with clinical and subclinical levels of common mental disorders, for a variety of professional and non-professional help sources. This paper provides a critical review of existing help-negation research, highlights implications for prevention and intervention, and suggests directions for further research. Studies have repeatedly found that people with higher symptom levels are also those with higher intentions to seek help from no one and the lower intentions to seek help from health care professionals, family and friends. Although the determinants of help-negation are not yet known, studies so far have found that help-negation is not fully explained as a function of hopelessness or lack of prior help, the belief that previous help-seeking experiences were of poor quality, or co-occurring symptoms of common mental disorders. Beliefs about the need for mental health treatment and the need to solve one's problems alone are associated with help-negation, but the role of these cognitions is still unclear. Findings of help-negation suggest that aspects of at least some types of psychological symptoms impede help-seeking. These findings also raise important implications for prevention initiatives and interventions that rely on proactively accessing and engaging in help. How successful can we expect to be if a consequence of experiencing psychological distress, even in its very early stages of development, is a tendency to withdraw from specific helping opportunities or avoid help altogether? Future consideration might be well placed on both identifying the determinants of help-negation and better understanding the role of neurological, social and cognitive variables in strengthening and maintaining the help-negation process. Improving what we know about help-negation might provide further clarification about why, globally, large proportions of people with common mental disorders do not access mental health services when such help is warranted.

Keywords: *help-negation, suicidal ideation, psychological distress, mental disorders, help-seeking*

How do value priorities of Muslims, Roman Catholics, Protestants, Eastern Orthodox, Jews and religiously unaffiliated differ?

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Differences in basic values may underlie conflicts among religious groups that have flared on the international scene. This presentation aims to provide a snapshot of value priority differences among Muslims, Roman Catholics, Protestants, Eastern Orthodox, Jews and religiously unaffiliated in Europe. It then identifies the influence of religion per se on these value priorities. Data are from representative national samples in 28 European countries plus Turkey and Israel, gathered in the European Social Survey between 2002 and 2006 ($N=102,000+$). A 21-item scale measured the Schwartz (1992) basic values. Multi-group confirmatory factor analysis assessed meaning equivalence (metric invariance) of values across religious groups. MANOVA across countries examined differences in religious group value priorities. To reveal the influence of religion per se, MANCOVA controlled individuals' background and within-country comparisons controlled country cultural differences. Six basic and unified values exhibited meaning equivalence: security, conformity/tradition, hedonism, power/achievement, self-direction/stimulation, and benevolence/universalism. Significant between group differences included Protestants attributing the most importance to benevolence/universalism and Muslims the least, Eastern Orthodox the most to importance to security and Protestants and unaffiliated the least, Muslims and Eastern Orthodox the most importance to conformity/tradition and unaffiliated and Jews the least, and many more for each value. Substantial differences prevail in the priority religious groups give to the basic values that serve as guiding principles in life. These differences are largely due to religion per se and may contribute to intergroup conflict.

Keywords: *basic values, intergroup conflict, religious groups, group differences*

How does employment-status affect psychological well-being? An analysis of the meditational qualities of the latent benefits of work.

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Unemployment has been related to serious psychological problems across several decades and cultures (Paul & Moser, 2009). According to latent deprivation theory (Jahoda, 1982) unemployed persons have less access to the latent and manifest benefits of work, which is why they report more distress. The presented study examines the individual impact of the latent benefits of work as possible mediators of the effect of employment on health. A longitudinal study among employed, unemployed and persons out of the labor force was conducted ($n = 1026$). Access to latent benefits and psychological health were measured using the Latent and Manifest Benefits of Work scale (Muller, Creed, Waters & Machin, 2005) and the General Health Questionnaire (Goldberg & Hillier, 1979). The results show that the effect of unemployment on well-being was mediated by access to latent and manifest benefits at each time point. Multiple-mediation analyses indicated that while financial benefits mediated the effect of employment status on health at each time point, the latent benefits worked differently well as mediators. Longitudinal analyses confirm the causal direction underlying the mediation. The presented study provides support for the proposed mediation of the effect of employment status on health by the latent and manifest benefits of work. In line with previous studies, the findings stress the need to consider the latent benefits of work as separate dimensions rather than as one overall concept.

Keywords: *unemployment, latent deprivation theory, distress, longitudinal study, psychological health*

How sharing influences emotions among friends

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The aim of this study is to discover the kind of issues and the level of sharing that occurred among pairs of close friends. The other aim is to understand how sharing may change their feelings and why. Thirty pairs of self-identified close friends took part in the study. They were university students from Malaysia. Participants were presented with 30 situations (e.g. when I have financial problems, when I am happy) and were asked whether they shared about these situations/feelings with their partner in this study. They were also asked to report how their feelings changed after these sharing sessions and why. This study is part of a bigger study on friendships of young adults. Findings suggest there was high level of sharing among close friends in this sample. Sharing also had a positive correlation with emotions, whereby the more sharing they did, the higher likelihood their emotions changed for the better. Sharing is highest when participants were stressed, bored, happy and excited. Participants reported less sharing when they have financial problems and when they experiencing jealousy. There were very few people reported feeling worse after some forms of sharing. Reasons why sharing related to feeling worse were either related to the partner (e.g. partner not responsive, partner over-reacted) or related to the self (e.g. not comfortable in sharing about financial problems). Reasons as to why sharing related to feeling better were also related to the partner (e.g. partner can help) or self (e.g. feeling better after sharing). These findings highlight several important issues. One is the importance of sharing, and secondly, how sharing can change the dynamic of friendship. Findings also suggest situations when sharing may not be helpful and can change the sharing experience to a negative one.

Keywords: *sharing, emotions, friendship*

Human factor aspects of signing complex road interchanges: Practice is lanes away from theory

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Complex interchanges, abundant in the US, account for more crashes per kilometre driven than any other segment of freeways (Northrup & Retting, 2004). Despite their lower prevalence in Australia, they account for 597 crashes in 2004. One factor contributing to these crashes is poor signage. Currently, sign designers apply the principles contained within the Manual of Uniform Traffic Control Devices (MUTCD) to sign complex interchanges. This manual is not designed to be a complete guide, and does not provide specific guidance for signing complex interchanges and lacks any human factors supplement (Smith, 1977). This research aims to identify human factors theories, empirical research and practice relevant to the problem of signing complex interchanges. This systematic review will be conducted to assess sign design characteristics and the implications for safety and system efficiency. A comprehensive search of databases and reference lists of articles was conducted. The selection criteria included peer-reviewed articles which addressed human factors principles (theory, studies) relating to the following aspects of signage: sign properties, interaction with the environment, and driver information processing. A set of recommendations to enhance signage practices on complex interchanges were identified. Sign self-evident properties (colour, shape, distinctiveness, familiarity, simplicity) recommendations were suggested to enhance the salience of signs and reduce information processing time. Recommendations included sign placement and interaction with the visual environment which were aimed toward reducing visual clutter and enhance driver information processing speed. Other recommendations target other aspects of information processing (driver perception, mental workload and driver comprehension) in terms of signage information/content and design of the overall signage system. This systematic review will

contribute significantly to the knowledge on complex signage design. It suggests that well designed signs may prevent road traffic crashes. However, further research using controlled experimental designs e.g. using simulators and computer studies, is needed to determine the effectiveness of each of the recommendations of improving system efficiency and road safety.

Keywords: *driving accidents, signage, human factors*

Human factors in non-destructive testing (NDT): First steps in approaching the challenge. Nuclear waste management in Sweden and Finland.

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The nuclear power industry has the responsibility for management and disposal of all radioactive waste from its plants. Finland and Sweden are leading in the world in the disposal of spent nuclear fuel. Their method consists of encapsulating spent nuclear fuel in copper canisters and depositing them in the bedrock at a depth of about 500 meters for the next 100 000 years, leaving the radioactivity to decrease naturally through the decay of the radioisotopes in it. The copper canisters, consisting of a copper tube, a lid and a bottom which make the outer shell and an insert made of a cast iron, need to be inspected for their structural integrity. This is done using Non-Destructive Testing (NDT) methods, such as ultrasound or radiography, to ensure no critical defects are present in the materials and welds that could lead to a leakage of the waste into the environment. Evaluations of the data gathered by NDT are performed by skilled human operators and could therefore be subject to human error. A multidisciplinary team of engineers, physicists and psychologists is working on estimating and improving the complete reliability of these testing methods. The capability of the NDT system to detect critical defects (those that exceed the acceptance criteria) is evaluated by calculating the probability of detection (POD). Different cognitive and organizational factors as well

methods of optimizing the detection of critical defects are a part of the human factors approach. Customized Failure Modes and Effects Analysis (FMEA) was used to identify possible risks that might lead to potential human errors. Several experiments (e.g. use of decision aids in identifying critical defects, social responsibility within the 4-eye principle, complacency bias in interaction with automated systems, or using the eye tracking methodology to optimize the detection of defects) have been proposed and some of them will be experimentally tested in ongoing projects. The first results are expected in the first half of the year and are, in general, expected to lead to the optimization of the procedures followed by the NDT operators and finally to improving the overall reliability of the system.

Keywords: *human factors, non-destructive testing, nuclear waste management, reliability, human errors*

Human factors influencing the social acceptability of forest landscape management in Tasmania, Australia

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Forest management is highly contentious, but the basis for public concerns is not well understood. Knowing the psychological factors that underlie public responses could help managers to better align forestry with the values and beliefs of the wider community. This research sought to explore the relative importance of psychological factors that underlie the social acceptability of forest landscape management. About 490 Australians filled in a questionnaire in which they recorded their: held values for the natural environment; deontological normative beliefs about how forests should be managed and trust in forest management agencies. They were also asked to respond to information about current forest management and they recorded scenic beauty, beliefs about impacts and social acceptability. Structural equation modeling was used to test whether the data collected were consistent with theorised relations between factors. The most

important factor directly underlying social acceptability was people's beliefs about whether management was good for the environment or not. Also important were people's trust in management agencies and their scenic beauty ratings. If people had more trust, or rated the managed landscape more beautiful, they tended to think it was better for the environment, and therefore more socially acceptable. There is a particularly strong relationship between scenic beauty and beliefs about environmental impacts. Held values for the natural environment were fundamental, underlying all the other factors. People with stronger use values tended to have higher levels of trust in managers, viewed current management as having more positive impacts on both the environment and the timber industry and rated it more socially acceptable. The reverse was true of people with stronger intrinsic values for the environment. This research shows that impacts on the natural environment are an important concern for many members of the public. The findings suggest managers would achieve more socially acceptable results if they placed greater emphasis on improving the environmental outcomes of forestry. The close relationship between beliefs about environmental impacts and scenic beauty begs theoretical questions that cannot be fully answered by this research.

Keywords: *forest landscape management, beliefs, values, social acceptability, trust*

Humour at work (HAW): The development and validation of a scale useful for human resources

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To describe the development of the Humour at Work (HAW) scale and its validation against humour, personality and work related scales using two independent Internet samples. An international sample (N=350) was asked to respond to 150 items developed from a wide variety of humour theories and approaches. Factor analysis reduced these to 62 items in eight factors. A second sample of 379 Australian workers responded to these items, plus

measures of mood, personality, general humour styles, climate of fear, job satisfaction, and other workplace measures. Confirmatory factor analysis indicated that the factors were reliable, and correlated in expected ways with general humour styles, job satisfaction and workplace climate. Confirmatory factor analysis further reduced the 62 items to two scales, essentially Pleasant and Unpleasant Climates of humour in the workplace. These factors were predictive of occupational climate factors which have been predictive of productivity. The HAW (either the 8-factor version or the 2-factor version) may be a useful measure in the workplace, since it is predictive of workplace measures that relate to workplace performance, but is less threatening than asking directly about such performance measures.

Keywords: *humour, humour, personality, climate, job satisfaction*

If you want to be a happy newcomer, find a role model!: A longitudinal study of new employee proactive behaviours and their relationship with socialisation success

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Research on new employees during organisational socialisation typically assumes that proactive behaviour will improve socialisation success, yet there is a lack of longitudinal research to examine relationships more closely. Hence the aim of this research was to assess whether increases in new employees levels of proactive behaviour were associated with greater socialisation success, as measured by typical indicators of this process. Data were collected from 80 new employees and newly-promoted employees across a range of organisations. Participants responded to a survey at weeks 2 and 12 after entry into their new role. Survey items included proactive behaviours (e.g., role modelling), newcomer learning (e.g., role domain), and work-related attitudes (e.g., job satisfaction). It was found that increases in role modelling predicted increases in learning in the three domains of role, social, and organisation, as well as

increases in job satisfaction and decreases in turnover intention. Increases in networking predicted increases in role and organisation learning, job satisfaction, and decreases in turnover intention. Increases in relationship building and positive framing predicted increases in role learning, job satisfaction, and decreases in turnover intention. Increases in general socialising were not associated with any of these criteria. These results provide the first longitudinal evidence that, in general, behaving more proactively is associated with better socialisation outcomes for new employees and newly-promoted employees. From a theoretical perspective, this research looking at the influence of individual proactive behaviours mirrors findings for organisational socialisation tactics. Specifically, in both cases, targeted actions with a social focus have a stronger positive influence on newcomer adjustment. From a practical perspective, given that careers are increasingly multi-role and multi-organisational, socialisation interventions should support newcomers in being more proactive, for example providing experienced employees to act as role models, and making their effective use the responsibility of all parties.

Keywords: *socialisation, employees, role modelling, work-related attitudes*

Impact of disasters on youth: disaster-related trauma, life events, and PTSD symptoms as predictors of children's somatic symptoms

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Natural disasters contribute to symptoms of posttraumatic stress disorder (PTSD) in children many months after destructive disasters. However, little attention has focused on health consequences of disasters, even though psychological stress affects one's health. Using a conceptual model of risk and resilience, this study examined the impact of hurricane-related traumatic stress and other life stressors on children's somatic symptoms almost two years after a natural disaster. Hurricane Charley, a Category 4 storm, struck Florida in August 2004, devastating 90% of the surrounding area. 220 children (55% girls; 85% Caucasian; *M* age = 8.7

years) participated. At 9- (Time 1) and 21-months (Time 2) postdisaster, children completed measures of hurricane-related stressors (Hurricane Related Traumatic Events-Revised), PTSD symptoms (PTSD-Reaction Index for Children), and life events; somatic symptoms were assessed at Time 2 with the Youth Self Report. Children reported moderate levels of PTSD symptoms (Time 1 $M = 19.81$; Time 2 $M = 17.71$), one major life event (Time 1 $M = 1.27$), and multiple somatic symptoms (Time 2 $M = 7.26$). Regression analyses evaluated predictors of somatic symptoms 21 months post-hurricane, controlling for children's age, gender, and ethnicity. Hurricane-related traumatic experiences accounted for 9% of the variance in somatic symptoms ($p = .01$) and Life Events accounted for 6% additional variance ($p = .001$). Time 1 PTSD also predicted Time 2 somatic symptoms ($r = .40$, $p = .001$), but hurricane experiences were not significant when PTSD symptoms were entered. Further tests revealed that Time 1 PTSD symptoms mediated the relationship between hurricane experiences and Time 2 somatic symptoms. This study is one of the first to examine children's health reactions to disasters and the first to examine predictors of such responses. Findings indicate that children report moderate PTSD and somatic symptoms almost two years following a disaster; that somatic symptoms may result from hurricane-related traumatic experiences; and that PTSD symptoms explain this prospective association. Children experiencing significant PTSD symptoms post-disasters are likely to report health or somatic concerns. Attention to children's physical health and mental health are important goals for assessment and intervention following natural disasters. Further study of the health consequences of disasters in children is important and desirable.

Keywords: *natural disasters, post-traumatic stress disorder, children, health*

Impact of parent – adolescent conflict on adolescent's psychological development

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This paper will report the results of the first of three studies and describe two planned studies aimed at the development of a conflict resolution model for use by parents of adolescents. This paper will also discuss the current literature related to parent-adolescent conflict, identify gaps in the literature, and suggest a number of steps that can be taken to fill these gaps. Study 1 was a retrospective study investigating the impact of parent-adolescent conflict on adolescent psychological development, the nature of the conflicts and conflict resolution methods used by parents and adolescents. Interview responses from 19 young adults (11 females and 8 males) aged 18 - 30 years ($M = 23$ years), were qualitatively analyzed through the application of Grounded Theory. Results indicated that the most severe conflicts resulted from parental enforcement of their own values, morals, and beliefs and that this pattern of conflict was particularly prevalent among fathers, irrespective of the gender of their adolescent child. The resulting conflicts were reported to have long-term effects on the psychological well-being of the participants. Given the findings obtained from Study 1, Study 2 is planned to investigate the same issues as Study 1 using a sample of parents and adolescents. Fifty parents and their adolescent child from intact, sole parent, and separated families will be recruited for this study. A questionnaire consisting of the Depression Anxiety Stress Scale (DASS21), the Satisfaction With Life Scale (SWLS) and open ended questions focusing on the current levels of conflict and conflict resolution methods will be administered. Based on results from the above studies, Study 3 will see the development and evaluation of a conflict resolution model for use by parents and their adolescent child.

Keywords: *conflict resolution, parents, psychological development, adolescents*

Impaired semantic memory in the formation and maintenance of delusions post traumatic brain injury: A new cognitive model of delusions

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This paper proposes a new cognitive model to explain the aetiology of delusions irrespective of diagnosis and/or phenomenology. The model hypothesises the influence of two processes in the formation and maintenance of delusions; (i) impaired perceptual abilities, particularly affect perception, which fosters the encoding of (ii) idiosyncratic semantic memories, especially those with an affective/self referential valence. Previous research has established that schizophrenia patients with delusions have impaired semantic memory function. In the current paper we sought to provide evidence for (ii) abnormal semantic processing in persons with delusions with an alternative aetiology. Performance of four cases with a significant delusion post a traumatic brain injury was examined on a broad range of semantic memory tests. Overall semantic processing was impaired in the four cases relative to a normative healthy control sample. Cases performed better on tasks which required categorical identification, relative to the novel production of semantic information, which was poor in all four of the cases. We have shown atypical semantic processing in deluded individuals who have sustained a traumatic brain injury. Importantly, the pattern of semantic performance recorded by our cases is consistent with schizophrenia patients with delusions, although in some cases they did not show such global semantic processing impairments. Taken together, we consider this as preliminary evidence for consistent abnormal semantic processing in persons with delusions, irrespective of diagnosis and phenomenology. This finding will need to be verified in larger sample groups of persons with delusional beliefs across a range of diagnoses.

Keywords: *delusions, perceptual abilities, semantic memory, traumatic brain injury*

Improved safety and reduced speeds resulting from a self-explaining roads process

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The research investigated whether a Self-Explaining Roads (SER) approach could improve road safety by establishing a road hierarchy with visually distinct designs at each level. Traditional approaches to improving road safety have focussed on treating isolated “black spots” in response to crashes or public complaints. Treatments that are highly localised or idiosyncratic may have the disadvantage of adding to the multiplicity of road categories and result in the migration of the original problem to nearby locations, rather than building driver expectations around a few consistent road types. The study area was divided into two equivalent sections, one to receive SER treatments and the other a control section. Analysis of speed data, crash reports, and resident surveys were used to identify: functional exemplars (roads at each level in the hierarchy that functioned well) and functional outliers (roads with speed, safety, or volumetric problems). The analysis revealed few physical and visual differences between local and collector road categories and corresponding heterogeneity of speeds and traffic volumes across the two road categories. A design template was created to extend design features from functional exemplars to functional outliers and reinforce the desired functions at each level in the hierarchy. Approximately 11km of local and collector roads were treated to create visually distinct road categories. Following treatment, vehicle speeds showed greater homogeneity of speeds within each road category and greater differentiation between categories. Speeds on local roads were reduced significantly (mean speeds fell from of 45km/h to 30km/h and 85th percentile speeds fell from 55 km/hr to 37km/hr). On collector roads, speeds were also reduced significantly, particularly the number of vehicles travelling at high speed (52% reduction of vehicles in the 70-80km/h range). Analysis of pedestrian and cyclist movements have shown increases in pedestrian activity and decreases in pedestrian and cyclist conflicts with motorised vehicles. The project was successful in demonstrating how an SER process can be applied to improve safety. The project has had a significant impact on how other road safety projects in New Zealand are undertaken with elements of the approach applied in two road safety projects in other cities.

Keywords: *road safety, reduced speed, self-explaining roads (SER)*

Improving critical thinking skills: Business students' gender, race, abilities, and motivation

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This study attempts to identify factors that may help business students improve their critical thinking skills. We also adopt a case-based critical thinking module (a short intervention) using the Solomon Four-Group Design and examine the effects of pre-test and intervention on possible changes of business students' critical thinking skills. We collected data from 659 business students in 14 courses at a regional state university in the US using multiple sources. Using the Solomon Four-Group design, we adopted a short case-based critical thinking intervention, used the *Watson-Glaser Critical Thinking Appraisal* (CTA) to measure students' CTA scores, contacted university's record office to obtain students' official age, sex, race, ACT test scores (English, Math, Reading, and Composite), and overall GPA (grades), and used an online survey to collect data regarding students' learning styles, modality, cognitive styles, and motivational orientations in one semester. Results showed that the main effects (case-based intervention and pre-test) and the interaction effect on CTA 2 (post-test) were not significant. From pre-test (CTA 1) to post-test (CTA 2), students in both Groups 1 (with intervention) and 2 (without intervention) improve their critical thinking skills. Overall, low pre-test scores (CTA 1) and high composite ACT scores contributed significantly to students' improvement. Female and white students improved their performance, whereas male and non-white (minorities) did not. Moreover, 35.5% of the students improved their CTA scores from pre-test to post-test. In Group 2, students who performed better had high GPA, were older, and female. Students with a strong competitive goal of "outperforming the average student" performed better; whereas those expected to "perform worse than their own usual level of performance" and used reflective and

kinesthetic learning styles performed worse. It is concluded that students' demographic variables, abilities, and motivation contributed to the improvement of critical thinking skills. Faculty and students are encouraged to set positive goals and create a warm climate for improving critical thinking skills in order to meet the future challenges of the competitive global market.

Keywords: *critical thinking, gender, race, abilities, motivation*

Improving elderly pedestrians' safety with a simulator-based training: Short- and long-term effects and age-related differences

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The present study aimed at improving the safety of elderly pedestrians through training. Past research has shown that elderly have trouble taking the approaching vehicles' speed into account and that they make many unsafe decisions when vehicles are approaching at high speeds. Twenty seniors (65-83 years) were enrolled in a street-crossing training program (experimental group). The training promoted repeated simulator-based practice and addressed the strategies elderly adults bring into play. Twenty other seniors (61-82 years) were assigned to a control group (internet-use training course). Before the training, immediately after, and six months later, the street-crossing behaviors of the 40 older participants were assessed using a simulated street-crossing task. The virtual environment displayed an urban scene with traffic coming from one side. Time gap between cars varied between one and seven seconds, and vehicle's speeds from 30 to 70km/h. The participants had to cross the experimental road when they judged that crossing was safe. Twenty younger participants (20-30 years) performed also the task to serve as a baseline. The training produced significant short- and long-term benefits by shifting the decision criteria towards more conservative judgments. Considerable improvements were also found in the control group, in such a way that no significant difference was found between the two older groups on the long-term follow-up. When

compared with younger participants, older pedestrians globally improved their behavior so that no differences in the mean safety-related indicators were observed any longer. However, the older participants' ability to take the oncoming vehicle's speed into account did not improve. Six months after training, older participants still made more unsafe decisions than younger when vehicles were approaching at high speeds. The findings suggest that combining repeated simulator-based practice with enhanced awareness of street-crossing dangers improve the overall older pedestrians' safety. However, the training failed to improve the seniors' use of oncoming vehicle's speed in deciding whether to cross. This finding may reflect age-related perceptual and cognitive impairments that cannot be remedied by a simulator-based training. A better understanding of the perceptual and cognitive abilities involved in street-crossing decision-making is needed and would be useful in designing future training programs.

Keywords: *elderly, pedestrians, safety, judgement*

Improving service quality through reflection in action, competence mix and role clarity

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The paper highlights the need to translate tacit knowledge into job tailored explicit competences to allow the managers in organizations improve service quality. The study was conducted to build on the Reflection in Action theory by examining how reflection in action can influence competence mix, role clarity and improve service quality. Reflection in action is understood as means of translating tacit knowledge to explicit competences (Keating, Robinson, & Clemson, 1996) by examining one's past behaviour and then determining new better actions that can address performance challenges especially as a result of changing work demands (Schön, 1987; Marsick & Watkins, 1990). A cross-sectional correlational study utilizing a questionnaire was used to collect data from 120 managers in six districts local governments in Uganda. The sample included head of

departments and heads of units. Validity of the items was established using both factor analysis and group differentiation techniques for all variables in terms of; role title/position; education level and time spent on job. Data was analysed using Pearson moment correlation and linear regression analysis. Results confirmed that reflection in action helps to unpack tacit knowledge in order to create explicit competence mix by indicating a significant positive relationship when Pearson moment correlation was used. Further on competence mix was found to correlate positively with role clarity. Consequently this leads to improvement in the quality of the services being delivered. Linear regression analysis indicated that the study variables linearly predict each other. In order to improve service quality, managers need to continuously look back and reflect on the way they have been solving their role/task related challenges, and what actions have led to successes or failures. They need to think critically on the challenges they have faced in relation to the work demands and determine new efficient ways of dealing with these challenges. This process helps them to acquire new relevant competences and thus become clearer when addressing problems that may arise as a result of changes in the work situation.

Keywords: *tacit knowledge, service quality, reflection, explicit competences*

Improving workability: Investigating modifiable organisational factors to ameliorate the effects of the ageing workforce

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Australia in one of the world's most rapidly ageing workforces due to its falling mortality and fertility rates. There is a strengthening case for retaining skilled employees at work for a longer period over their life-course. The Finnish Institute of Occupational Health has for some decades now used an indicator of workability (that is, one's subjective or objective assessment of ability to work into the future) as a way of signaling health and functionality in the workforce over time. With the increase in

demands between work and family life for Australian employees, this may also require considering the effects of family and work on workability and occupational health. This study aimed to investigate the relationships between work life balance and workability. The study also aimed to investigate organisational factors that may mediate this relationship, such as stress and leadership culture. The cross sectional study involved surveying participants of a large government organization and private consulting organization ($N = 128$). Surveys were distributed through participants' organisations and completed online. As predicted, the results of a hierarchical regression analyses suggested that work-life balance (WTFS: negative work to family spillover) and psychological rather than chronological age were significant predictors of workability. These relationships were partially mediated by leadership culture and entirely mediated by occupational stress. The results of the final model suggested that workability is likely to increase when psychological age, negative WTFS, and vocational strain decrease. These findings provide new pathways for planning strategic long term interventions to promote retention of mature aged workers by addressing issues of work-life balance, leadership culture and occupational stress.

Keywords: *ageing workforce, workability, occupational stress, occupational health, work-life balance*

Increasing rates of organ donation – the role of the “ick factor” and anticipated regret

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Over 90% of the general population state that they are in favour of organ donation, however far fewer are registered on the organ donor register. This research tested the role of emotional barriers to organ donation such as the “ick factor” (a basic disgust reaction to the idea of organ donation). In addition we tested the potential role of manipulating anticipated regret to increase intention to donate in people who are not yet registered as organ donors. In 3

Experiments involving 635 members of the UK general public, participants were invited to complete questionnaire measures tapping the emotional factors such as “ick”, the desire to retain body integrity after death and medical mistrust. Registered organ donors were compared with non-donors. Non-donors were randomly allocated to an anticipated regret manipulation (2 additional questions) versus a control condition, and the impact on intention to donate was tested. In all three experiments non-donors scored significantly higher than donors on the “ick” factor and bodily integrity scales. Traditional rational/cognitive factors such as knowledge, attitude and subjective norm failed to distinguish donors from non-donors. For non-donors, the anticipated regret manipulation led to a significant increase in intention to register as an organ donor in future. Negative emotional factors are important barriers for people becoming organ donors. In particular, a basic disgust reaction when contemplating donation and the desire to retain bodily integrity after death are key areas to target to test if they are changeable. In addition, a simple anticipated regret manipulation has the potential to significantly increase organ donation rates.

Keywords: *organ donation, “ick factor”, emotional barriers*

Increasing specificity of autobiographical memory: An investigation of the contribution of pictorial cues

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Over-general autobiographical memory has been implicated as vulnerability for the development of depressive and posttraumatic stress symptoms following stressful life events. Imagery has been found to increase memory specificity among clinical and non-clinical participants. Therefore the primary aim of the current study was to investigate whether emotion picture cues increase autobiographical memory specificity compared to emotion word cues in a non-clinical sample. A non-clinical student sample ($N = 79$) completed the Autobiographical Memory Test (AMT) with

emotion word cues and emotion picture cues. Both tasks were completed with and without prompting for a specific memory. Participants also completed a questionnaire package including measures of depression (BDI-II), past traumatic life events (LEC), and posttraumatic stress symptoms (PCL-C). A significant interaction between cue type and prompting was found ($OR = 3.36, p = .001$). When participants were prompted to retrieve specific memories in response to positive and negative cues, they retrieved significantly more specific memories in response to picture cues compared to word cues ($OR = .40, p = .001$). However, when no prompting was given, there was no difference in memory specificity between picture cues and word cues ($OR = .98, p = .88$). Among female participants, there was a trend [$t(65) = 1.85, p = .07$] for quicker retrieval of memories in response to picture cues compared to word cues on the prompted AMT. Findings indicate that images enhance memory specificity, even when they are of emotional content. However, this does not seem to be due to the initiation of direct memory retrieval as picture cues only increased memory specificity when participants were prompted. Moreover, these results have implications for imagery training in enhancing memory retrieval particularly for populations susceptible to developing mood and trauma-related disturbances.

Keywords: *autobiographical memory, depression, post-traumatic stress, Imagery*

Individual factors explaining resilience in extreme poverty

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Poverty exposes individuals to many risk factors that compromise their quality of life and their psychological functioning. Sameroff, Bartko, Baldwin, Baldwin, and Seifer (1998) state that the greater exposition to risk factors in infancy diminishes their social and emotional development and increases the probability of psychological disadjustment. At the same time, research on resilience seeks an answer to the question as to why some individuals at high risk or with a very adverse background seem to grow

well adjusted, while others failed (Anthony & Cohler, 1987; Cicchetti & Garmezy, 1993; Garmezy, 1990; Masten, Best, & Grmezy, 1990; Ruter, 1987; Werner & Smith, 1982). The purpose of this study is to contribute with information about which individual factors (motivation to achievement, ability to cope with stress, religiousness, control locus, emotional intelligence) promote resilience in extremely poor beneficiaries of a social development program of the Mexican federal government. The sample was constituted by 914 individuals, all of them beneficiaries of the program "opportunities" during the period 1997-2008. Their age ranged between 22 and 93 years old, with a mean of 43.71 years and a standard deviation of 12.58. Besides, 595 (65.2%) were women and 318 (34.8%) were men (husbands of these women). The results from this research allowed to identify some characteristics associated with resilience, which contributed to determine which factors should be addressed in high risk individuals (extreme poor) in order to promote or increase opportunities to improve their condition.

Keywords: *poverty, resilience, quality of life*

Individualised teaching and learning by online assessment

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Changing educational structures and increasing student diversity call for valid information for students, career advisors and teachers to individualise the learning. It requires custom-fit advice on subject choice, learning and study methods, management of time and choices for further learning and career options. This custom-fit advice requires a detailed and valid student's profile. Together with governmental bodies in Ireland and the UK an online assessment system has been implemented that provides feedback on: learning style, learning capabilities, time and organisation management, interests and multiple and preferred intelligences. Results from a first evaluation study in Irish schools ($N=9,423$) indicate acceptance by the users and validity of the measures. The schools use the information to guide individual students but also

formulate holistic strategies and decisions for the entire school to change the way they teach.

Keywords: *teaching, education, individualised learning, online assessment, learning strategies*

Individualized age-related leadership

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Demographic change makes it necessary to keep elderly employees integrated in the work process. The only highly-significant factor to improve the employability of elderly employees is age-related leadership (i.e. FinnAge Studies). The objective of the study was the measurement of perception, attitude and behavior as aspects of individualized age-related leadership of managers/leaders with respect to age-related factors of employability and integration of elderly employees. The framework of this study was the concept of individualized age-related leadership (Braedel-Kühner, 2005). $N = 394$ leaders from Switzerland and Germany completed a questionnaire with scales to their attitudes, leadership behavior, perception, performance ratings in respect of age-related aspects of the employees. One scale measured the self-perception of the own aging of the leaders. Different factors of attitudes and leadership behavior in individualized age-related leadership are identified. Descriptive analysis shows attitudes and leadership behaviors of European leaders with respect of aging employees. Differences between attitudes and behaviors were analyzed. Age-related leadership behavior and attitudes show a significant difference in the most items of the questionnaire. In general is the level of age-related leadership behavior below the appropriate attitude. The biggest difference between attitude and behavior shows the scale "work design". "Employability" of the employees is most relevant for the leaders: training and development, managing of the work load and ergonomics will be more actively influenced by the leaders than i.e. health and health management. Most areas of age-related leadership show a positive age-related attitude compared to the appropriate leadership behavior. There is no sign of an age-related negative stereotype of elderly employees. Some

areas of leadership behavior are less developed than others (i.e. health management). Information and training will be helpful for leaders. Discrepancies between attitude and leadership behavior might be a lack of empowerment or flexibility in leadership. Management decisions are necessary to improve the age-related leadership as it is not a matter of the attitudes of the leaders.

Keywords: *elderly employees, individualized age-related leadership, employability*

Influence of occupation and low income on study success of first year students

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The transition from school to university is a critical life event. Besides new academic tasks students are often confronted with economic aspects of life, like financing life and study. Prior research demonstrated a negative effect of working and/or financial problems on academic achievement, for example the need to work to make a living increases drop-out. In fact, approximately two thirds of all students at Austrian universities work during the studies. The aim of this study is to investigate the effects of occupation during study and low income on study success during the first semesters. In addition, factors that may counteract the negative effects are examined. 989 psychology undergraduate students answered questions about their occupation status, hours of work per week and monthly income in their first semester. Furthermore, frequency and intensity of social contact to other students were asked. Study success was measured after four semesters by number of taken courses and the received grades. Using cluster analysis, students were classified in four groups (depending on monthly income and status of occupation): very low income/no occupation, low income/no occupation, low income/occupation and high income/occupation of half of group. Results demonstrate that low income students, who are occupied, have the lowest grades of all four groups and take fewer courses than students, who are not occupied. The high income group,

where about the half of the students is occupied, takes fewer courses too, but has better grades than the occupied low income group. Interestingly, the number of working hours per week has no influence on received grades. When students hold contact with a higher number of colleagues, the occupied low income group shows improved grades, but the number of taken courses remains stable. Being occupied and having a low income is a risk factor for students and leads to less academic success. Social assistance from colleagues, on the other hand, can counteract the effect and improve the grades of this group. Possible effects of tuition fees are discussed.

Keywords: *transition, financial problems, academic achievement, occupation, study*

Influence of organizational capacity factors in perceived changes

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Change in the organizational environment is constant and necessary. The technological development, the market dynamics and the relationship with customers require quick and flexible strategies. Changes can occur only in some aspects of the organization with a view to implementing adjustments and improving efficiency. This is called Transactional Change. When the organization itself is reframed, resulting in a new mission and a shift in its underlying strategy and processes, change is referred to as Transformational. Change occurrences can be hindered or enhanced due to some organizational capacity factors, including the information flow, an organizational action strategy, coalition support for change, turbulence in the external environment, group autonomy, bureaucracy and reliance on managerial action. The present paper aims at appraising whether these factors influence or not the way individuals perceive the transformational and transactional changes in an organization. The data ($N = 340$) have been gathered in a number of questionnaires applied in a public institution that has been merged with other organs, undergone management changes and had some of its areas restructured. The Organizational Capacity Assessment Tools for

Changes and the Change Perception Tool have also been used. The results point out that the organization's action strategy, the coalition dynamics and the communication flow ($R^2 = 0,35$; $p = 0,011$) are predictive factors for Transformational Changes perception. As for Transactional Changes, group work ($R^2 = 0,16$; $p = 0,001$) is barely considered a predictive factor. As previous research work in public institutions have already demonstrated, the analyzed organ has failed to present organizational capacity for changes. The research results are analyzed taking into account the reviewed literature and the practical implications of this work.

Keywords: *organisational change, organisational capacity, transformational change, transactional change*

Influence of social support on workplace adaptation of Serbian migrants in Australia

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The aim of the current study was to ascertain whether social support as a coping strategy is useful in mitigating work related stressors amongst Serbian migrants and examining its influence in their adaptation to the Australian organizational climate. This is important to determine to understand the nature of Serbian migrants' adjustment to the Australian workplace. Participants included 78 Serbian migrants including 43 males and 35 females who completed a Demographic Questionnaire, the Coping Resource Inventory and the Work Environment Scale - Form R. Standard multiple regression analyses were conducted to determine the effects if social support on adaptation to the work climate. The results show that social support partly predicted adaptation to organizational climate amongst Serbian migrants. Specifically, it was found that social support makes the most significant contribution to peer cohesion (20 %), followed by supervisor support (13 %), clarity (10 %), innovation (9 %), physical comfort (9 %), involvement (8 %), task orientation (7 %) and autonomy (6 %). However social support did not significantly predict work pressure and managerial control. The findings

suggest that social support is a tool that eases the impact of cross cultural adjustment to the organizational climate amongst Serbian migrants. Consequently these findings have the potential to assist both current and future migrants in successfully adapting to the work environments in their host country.

Keywords: *Serbian migrants, work related stressors, social support, Australian workplace, organizational climate*

Influencing desire and intention to perform health behaviours: a reverse effect of regulatory fit

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This study's aim was to investigate the interaction between an individual's chronic regulatory focus and the framing of persuasive health messages (either loss-framed or gain-framed) in influencing desire and intention to perform the advocated health behaviour. From a theoretical perspective, a message's effectiveness is thought to be greater when there is congruence between regulatory focus and message frame ("regulatory fit") than when there is incongruence. This study sought empirical support for this idea for messages advocating smoking cessation and undergoing skin cancer examinations. An online questionnaire system randomly assigned participants to a behaviour type (either smoking cessation or skin examination) and message frame (either loss-frame or gain-frame) condition (thus there were four conditions). Participants were presented with questions about current/past health behaviour followed by a set of messages advocating the respective health behaviour framed either in terms of losses or in terms of gains. Participants then completed Likert scale items assessing intention and desire to engage in the behaviour (within 6 and 12 month timeframes). After controlling for past/current behaviour, moderated regression analyses revealed a significant message frame-by-chronic regulatory focus interaction effect for intention and desire to quit smoking (for both 6 and 12 month timeframes) but it was a reverse effect to that predicted (i.e. intention and desire

to quit was greater in the absence of regulatory fit than in its presence). No significant interaction effect was found for skin examination conditions. Although regulatory fit typically enhances the positive evaluation of a message, it has been suggested that if the message is negatively evaluated to begin with, regulatory fit may enhance that negative evaluation. It is suggested that the anti-smoking messages may have provoked a negative response among participants (e.g. through psychological reactance) that was strengthened when regulatory fit was present. Thus, in developing health campaigns/messages/interventions, under certain circumstances regulatory fit is not always desirable for maximal effectiveness. The lack of effect for skin examination is thought to have resulted from insufficient framing strength, as indicated by a non-significant framing manipulation check for that behaviour.

Keywords: *chronic regulatory focus, persuasive health messages, desire, intention*

Influencing tactics at work: Managers and subordinates perspectives

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The aim of this research was to build understanding of subordinates' influencing tactics. Work to date indicates that the relationship between a manager and their staff member may affect which influencing tactics subordinate may use, as well as the subordinate's political skill. Other work suggests that higher performing staff use tactics differently to staff who perform less well. This study which seeks to identify the relative contribution of relationship and individual factors captures the perspectives of both managers and subordinates. Unmatched subordinates ($N=182$) and managers ($N=110$) completed an online survey which assessed the frequency of use of six influencing tactics. Subordinates and managers also assessed Political skill, Leader Member Exchange, Role Breadth Self-Efficacy, Control and Change Orientation and Performance. Poorer self-

reported performing subordinates used tactics more than did higher performing subordinates. High and low performing subordinates, as measured by self assessment, reported using tactics differently. Adaptivity and change orientation predicted influencing tactic use for high self reported performers only. Relationship with manager and political skill were found to be only weak predictors of influencing tactics. Current understanding of the determinants of subordinate tactic usage is incomplete and suggests that higher performing individuals would influence more, and favour rationality as their preferred tactic. This study suggests that this may be an oversimplification, although providing an insight into the complex role of individual differences in predicting the means by which subordinates seek to influence their managers.

Keywords: *influence tactics, political skill*

Information and reputation influences in portfolio decisions: Herd behavior

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This investigation adopted the notion that risk decisions change as a function of perceived gain and loss situations (Tversky & Kahneman, 1981; Thaler & Johnson, 1990) and aimed to distinguish between two types of investment propensity that stock investors have. The tendency to sell winning stock and keep losing stock is called the disposition effect. The opposite tendency, to keep winning stock and sell losing stock is called the non-disposition effect. Two experimental studies were conducted examining whether sources of expert or non-expert information in stock investment would facilitate (or impede) the initial investment propensity (i.e., disposition or non-disposition effect) of the participants, resulting in forward (or backward) herd behavior. 75 participants were randomly assigned to Non-expert ($N=25$), Expert ($N=25$), and Control ($N=25$) groups in both study 1 and 2, respectively. In the Pre-test, each participant made stock portfolio decisions about how they would buy, sell, or keep each three of winners and losers, which were used to classify them as

showing either disposition and non-disposition effects. In study 1, the Non-expert group was shown the decisions of ordinary people showing a non-disposition effect. The Expert group was given identical scenarios, but instead of ordinary people, the decisions appeared to be from experts. The control group was not exposed to any decisions. Study 2 was identical, but with one twist: The Non-expert and Expert groups were shown the decisions of both ordinary and expert people showing a disposition effect (selling winners and keeping losers). In the Post-test, participants completed the portfolio decisions as at Pre-test. In study 1, disposition effect participants in Non-expert and Expert groups showed a tendency toward a non-disposition effect than those in a control group, whereas no reliable difference was found for non-disposition effect participants. In study 2, non-disposition effect participants in Non-expert and Expert groups showed a tendency toward a disposition effect than those in a control group, whereas no reliable difference was found for disposition effect participants. Observing the decisions of both others and experts who have counter-investment propensities to their own may result in the reversal of the initial investment propensities of stock investors (i.e., backward herd behavior).

Keywords: *risk decision-making, perceived gain, perceived loss, disposition effect, non-disposition effect*

Integrating the educational themes of Vygotsky's theory: Speech as a mediator between the zone of actual development and the zone of proximal development

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The conceptualization of speech as a core mediator and instrument of thought is a pinnacle of Vygotsky's socio-cultural theory, whilst the notions of the Zone of Actual Development (ZAD) and the Zone of Proximal Development (ZPD) have become central to contemporary educational practices and interventions. The contextualization of the use of speech as a tool for cognitive operations

within the continuum of the child's ZAD– ZPD has remained insufficiently explored from both theoretical and empirical perspectives. The aim of the study was to explore the role of speech as a tool for problem solving in the context of the child's ZAD and ZPD. In a prediction model, it was explored whether the use of various task-oriented speech subtypes would predict the outcome of individual global task performance (success or failure). The participants were 120 children, aged between 5 years, 6 months to 9 years, 5 months selected from pre-primary and primary schools in South Africa. Speech utterances produced during completion of the Raven's Coloured Progressive Matrices were transcribed and then coded into distinct speech subtypes– inner, private (self-directed), social (addressed to another) speech, encompassing various semantic contents. The findings revealed that those children, who performed successfully, demonstrated a higher mean use of the overall task-oriented speech subtypes compared to the children who failed the task. The semantic contents of social and private speech with the most pronounced task-oriented salience (*describing task activity* and *describing task material*) together with inner speech showed high predictive values and predicted significantly the outcome of individual task performance. The results obtained suggest that both the diversity and the extensive use of task-oriented speech subtypes are implicated in the child's attainment of a successful task performance. Speech in its various forms was conceptualized as a multifarious mediator, which provides the internal integrative links within the child's ZAD– ZPD continuum and carries out the transition of his or her competencies from the ZPD to the ZAD. It is concluded that the potential of children's use of various task-oriented speech subtypes for fostering academic performance should be acknowledged and implemented widely in contemporary educational practices and interventions.

Keywords: *Vygotsky's socio-cultural theory, speech, Zone of Actual Development (ZAD), Zone of Proximal Development (ZPD)*

Integration courses students with learning disabilities: Their self-concept and sense of loneliness

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This research investigated (a) high school students' self-concept and sense of loneliness, who had Learning Disabilities (LD) and attended Integration Courses (IC) through the school year, (b) the formation of self-concept, sense of loneliness, and of the association between the two constructs through the school year (from the first to the third school term), and (c) the role of both gender and LD type (General Learning Disabilities -G.L.D.- / Specific Learning Disabilities -S.L.D.-) in the generation of self-concept and sense of loneliness. The participants were 200 high school students, both gender, 7th to 9th grades, who came from schools of various towns of Greece. The students completed the scales twice, in the first and third school terms. The main scales were the 'Self-Perception Profile for Children' (Harter, 1985) and the 'Children's Loneliness Questionnaire' (CLQ, Asher, 1985). The results showed that the students' self-concept was high, with the exception being in the overall academic competence and ability in mathematics that remained low during the school year. Furthermore, during the IC, the students' self-concept increased, particularly in literary ability, and in ability in relationships with their peers, close friends and parents. Students' sense of loneliness was low, and it decreased through the school year. Self-concept was moderately and negatively related to sense of loneliness. Gender had limited significant effects, since boys as compared with girls had a higher self-concept in physical appearance, in the third school term. Students with G.L.D. as compared with students with S.L.D. had lower self-concept in both overall academic competence and sport ability, in the first and third school terms, and in ability in their relationships with close friends, in the third school term. The findings are discussed for implications in education and future research.

Keywords: *self-concept, sense of loneliness, students, Learning Disabilities, gender*

Integrity and corruption: A cross-cultural analysis

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Despite the extensive research on integrity testing in personnel selection over the past few decades, very little cross cultural evidence is currently available. Advancements in the area of cross cultural integrity testing are of particular importance to the numerous organizations and practitioners using these tests internationally today. In light of this importance, the present study aims to provide contributing evidence towards a better understanding of cross cultural integrity testing. This study compares mean integrity test scores across 27 countries, based on data collected from 60,952 job applicants, and examines the relationship between these scores and the Corruption Perceptions Index (Transparency International, 2009), a comparative index of country-level corruption, as a broad measure of cross-cultural validity. G. S. Hofstede's (2001) cultural dimension indices per country are then used to explain these findings. It was hypothesized that cultural attitudes towards employee crimes, as measured by aggregated levels of overt integrity, would vary in accordance with the degree of Hofstede's "power-distance" and "collectivism" dimensions, which are traditionally related to loyalty and a lack of criticism towards one's in-group behaviors (even when these behaviors are corrupt), and that these cultural attitudes would in turn be associated with the corruption levels in those countries. Confirming this hypothesis, significant variance was found between cross-cultural integrity test scores overall [$F(26,60925)=164.38, p<.001$], and this variance was significantly related to power distance ($r = -.72$), collectivism ($r = -.46$), and levels of corruption in the countries sampled ($r = .48$), as expected. The results of this study are believed to make meaningful theoretical and practical contributions to the understanding of integrity tests as measures that are sensitive to differential cultural and attitudinal norms, and as robustly valid predictors of work related corruption across settings, organizations and countries.

Keywords: *integrity, personnel selection, cross-cultural*

Intention as a predictor and outcome of the career behavior of health professionals

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The Theory of Planned Behavior (TPB, Ajzen, 1991) has been used a great deal to predict behaviors in a variety of non-work settings. Recently there has been increased interest in applying and testing TPB in work settings (e.g. Van Hooft et al., 2006) but this remains a relatively under-researched context for the TPB. In particular, there is a need to establish the link between intention (a proximal predictor of behavior in TPB) and behavior. Many studies only investigate intention, and especially in an unpredictable world of work it is not clear that people's intentions closely reflect their subsequent behavior. As part of a broader study, 1371 physiotherapists, radiographers, speech and language therapists and occupational therapists in the United Kingdom were surveyed in 2005 and again in late 2007. 756 (55%) responded on the latter occasion. Information about career histories and current status, and intention to be employed by the National Health Service (NHS) was obtained on both occasions. In 2007 respondents were also asked about their search for NHS and non-NHS jobs since they completed the previous questionnaire, and about what proportion of their current work was on behalf of the NHS. After controlling for employment status in 2005, intention in 2005 was a weak but statistically significant predictor of whether a respondent was employed by the NHS in 2007. Intention was a strong predictor of searching for jobs outside the NHS, and a moderate predictor of proportion of work time spent on NHS work. However, close inspection of subgroup means suggests that intention was at least as much an outcome of prior behavior as it was a predictor of subsequent behavior. Opportunities for these health workers in the NHS became very limited in the period studied, thus constraining movement. Nevertheless, intention in 2005 was still a predictor of employment status more than two years later, and of job search behavior. This adds confidence both in the TPB and in the use, for management

purposes, of attitude surveys that assess intention. However, there is also support for the role of past behavior as a shaper of intention.

Keywords: *Theory of Planned Behavior, intention*

Interactions between individual and organizational determinants of energy-related behaviors in office buildings

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Previous research on pro-environmental behavior in organizations has paid little attention to the interplay between individual-specific and organization-specific determinants. This paper aims to systematically examine these interactions for energy-related behaviors in the office building. We conducted a qualitative study (52 semi-structured interviews; 6 focus groups) and a cross-sectional survey study with office workers of two companies, a non-profit organization, and a university. Results were compared to identify inter-organizational similarities and differences with a focus on individual-organization interactions. In the qualitative study, salient themes found in all organizations were the prioritization of personal work interests, the relevance of self-efficacy and its interactions with the organizational context, and the relative absence of specific relevant social norms in the organization. Work interests such as personal work efficiency and quality were commonly perceived to be incompatible with energy-saving behaviors, whereas financial and other macro level organizational interests were more often argued to benefit from energy saving. Self-efficacy was very explicitly stated as a behavioral determinant. Furthermore, its relation to organizational facilities, policies, norms, division of labor, and managerial influences was frequently discussed. In contrast, social norms were usually not perceived to be an important determinant of current behavior, although interestingly, they were often proposed as an important element in improvement strategies. Preliminary quantitative results also indicate that, compared to the overall office population, the effect of social norms was strong and more consistently

significant among respondents able to gauge social norms. The major inter-organizational difference was the relative importance of normative, gain, and hedonic motivations that could be related to the divergent organizational foci. Unlike the interpretation of gain as personal interest in goal frame theory, it was useful to interpret gain motivations as a cost-benefit analysis that could encompass personal, organizational, and societal or environmental interest (Lindenberg & Steg, 2007). The findings underscore the relevance of individual-organization interactions and can inform interventions aimed at harmonizing these interactions to improve pro-environmental behavior in organizations.

Keywords: *individual-specific determinants, organization-specific determinants, pro-environmental behaviour*

Intercultural competence of early childhood teachers in creating a culturally inclusive and enriching learning environment

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Intercultural competence can be defined as the ability to communicate effectively and appropriately in intercultural situations based on one's cultural knowledge, skills, and attitudes. In a multicultural or international education context, teachers and students coming from diverse cultural backgrounds engaged in frequent social interactions. Very often, two or more teachers from different cultural backgrounds may share responsibility for teaching the same class, which involves sharing responsibility for planning, implementation, evaluation of students, and creating a culturally inclusive and enriching learning environment. This pedagogical approach is a form of co-teaching and can be termed as "co-cultural teaching". It has been suggested that Eastern and Western people have different cognitive styles. Without understanding the cognitive style differences and nurturing intercultural sensitivity, this co-cultural teaching partnership can present some difficulties for intercultural communication. On the other hand, it has been

suggested that teachers' intercultural competence can facilitate developmentally and culturally appropriate practice. To date most studies on co-teaching have concentrated on special education in primary or secondary levels. Little information was available on co-cultural teaching in early childhood education, especially in an international school context. This study aimed to fill this gap by investigating the effects of co-teachers' intercultural and social competence in determining their co-cultural teaching behaviour in an international early childhood context. Participants were early childhood teachers recruited from international schools in three locations: Hong Kong (China), Beijing (China), and Silicon Valley (USA). Co-teaching partners were formed by one Chinese-speaking and one English-speaking teacher in the same class. They completed a newly validated self-report questionnaire that assessed intercultural competence, social competence and four dimensions of co-cultural teaching (i.e., co-planning, co-implementation, co-assessment and creating a culturally inclusive and enriching environment). High level of reliability scores were yielded with an average Cronbach's Alpha of above .80. Results indicated that Chinese and English teachers differed significantly in their perception of the importance of consensus in co-cultural teaching. Intercultural competence was predictive of creating a culturally inclusive and enriching environment. Social competence was predictive of co-planning, co-implementation and co-assessment. This result has strong implications for intercultural communications in international or multicultural early childhood settings.

Keywords: *intercultural competence, co-cultural teaching, early childhood education, international*

Interrelations between patients' personal life events, psychosocial distress and substance use

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This study investigated interrelations between life events, psychosocial distress, self-efficacy

and substance use among patients with substance use disorders. Gender differences in these interrelations were also explored. Although research has established an association between negative events and substance use, it is important to consider both positive and negative events in this line of inquiry as positive events may buffer stress and reduce substance use. A convenience sample of 350 patients with substance addiction was recruited during 2008 and 2009 from 16 Norwegian treatment facilities for substance use disorders. The patients completed a questionnaire with validated measurement instruments. The SCL-90-R, Inventory of Interpersonal Problems – Circumplex, GSE, DAST-20 and AUDIT were used to measure psychological distress, interpersonal problems, self-efficacy and substance use respectively. Positive and negative life events were defined by the patients through open-ended text boxes. Interrelations between the variables were investigated by Structural equation modelling (SEM). The results suggested that negative life events facilitated substance use and psychological distress. Positive life events were associated with self-efficacy, but were weakly related to substance use. Important gender differences were detected in the role of negative life events for substance use. Such life events were solely a predictor of substance consumption among males. Positive life events related to self-efficacy among females, whereas it had a direct effect on substance use among males. The results supported the notion that males are more prone to adapt to negative life events by behavioural action (i.e. substance use). A clinical countermeasure could be to focus on adaptive coping strategies of negative life events during clinical consultations of male patients. Females could be more prone to construe positive events cognitively through improving their coping cognitions, whereas males could be more likely to utilise positive life experiences to alter maladaptive behaviour.

Keywords: *personal life events, psychosocial distress, substance use, self-efficacy, gender*

Interventions that simultaneously enhance resilience, cooperation, and intuition: The role of leadership and regulatory fit

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Recent advances in the fields of cognitive science, emotional processing, and neuropsychology have uncovered a system, called extension memory, primarily represented in the right hemisphere, which elicits positive emotions, promotes cooperation, and improves intuition. This system is activated when individuals are granted opportunities to pursue activities that align with their core inclinations. Three studies were conducted to assess this model. In the first study, 219 participants read either a threatening or supportive message. Threatening messages motivate individuals to redress problems, whereas supportive messages motivate individuals to expedite progress. Individuals next read an advertisement that either converges with, or diverges from, this motivation. If individuals read an advertisement that converges with this motivation, they subsequently exhibited more positive emotions, as gauged by the IPANAT—an implicit measure of core affect. In the second study, 90 participants were exposed to vignettes of either a collaborative leader (a style of leadership that enables employees to pursue their core inclinations), or an autocratic leader (a style of leadership that stifles these pursuits). Subsequently, participants completed a task that putatively assesses their ability to apply their intuition and reach accurate decisions. In particular, participants received 48 pieces of information, in a pseudorandom order, about four office locations, and needed to identify the best alternative. Participants exposed to vignettes about a collaborative, rather than autocratic, leader performed more effectively on this decision making task. In the third study, participants were instructed to imagine either an authoritarian or non-authoritarian leader. Next, they completed the IPANAT. Finally, to assess their implicit motives, participants completed the Multi-Motive Grid. If participants imagined a non-authoritarian, rather than authoritarian, leader (a leader who tends to grant employees enough autonomy to pursue their core values) they demonstrated less anxiety. Furthermore, they were more likely to exhibit a need to establish relationships rather than seek power. Accordingly, interventions that enable

employees to align their behaviour with their core values seem to activate extension memory. When this system is activated, many of the qualities and attributes of employees that organizations covet are reinforced; resilience, altruism, and decision making are all likely to improve.

Keywords: *extension memory, leadership style, core inclinations, decision making*

Intolerance of uncertainty and meta-worry: Relative importance in discriminating GAD

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The present study investigated the role of intolerance of uncertainty and meta-worry in Generalised Anxiety Disorder (GAD) by comparing individuals diagnosed with GAD to two non-clinical groups, those scoring high on measures of GAD and those with low scores on measures of GAD. The participants were 107 GAD clients and 91 university students. All participants completed a battery of scales. The students were divided into two groups, those scoring high on measures of generalised anxiety symptoms were labeled as *high GAD symptom group* and those scoring low on generalised anxiety symptoms were labeled as *low GAD symptom group*. The GAD clients were labeled as *GAD group*. A multivariate analysis of variance (MANOVA) indicated that intolerance of uncertainty distinguished between the *low GAD symptom group* and the *high GAD symptom group*, and between the *low GAD symptom group* and the *GAD group*. Intolerance of uncertainty did not distinguish the *high GAD symptom group* from the *GAD group*. Meta-worry distinguished all three groups. A discriminant function including intolerance of uncertainty and meta-worry was effective for classifying 94.4% of the *GAD group* and 95.7% of the *low GAD symptom group*. Only 9.1% of the *high GAD symptom group* were classified correctly, 84.1% of the *high GAD symptom group* were classified as GAD, possibly some of this group may have met the diagnostic criteria for GAD. The findings indicate that intolerance of

uncertainty and meta-worry may assist with the diagnosis of GAD. Further, addressing both intolerance of uncertainty and meta-worry in treatment interventions may prove useful for GAD clients.

Keywords: *Generalised Anxiety Disorder, intolerance, meta-worry, uncertainty*

Investigating the moderating role of prior exposure to aggressive home culture in the relationship between negative reciprocity beliefs and physical aggression

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Attention to youth aggression has been rarely sustained, usually stimulated by the media, and then followed by blame. The same can be said regarding efforts to investigate its antecedents, mechanisms, and the following consequences (Marcus, 2007). Although youth violence and aggression has been studied in the past, current theories that take into account individual differences may shed additional light on the incessant question; 'why do people aggress?' Drawing upon the General Aggression Model (Anderson & Bushman, 2002) and Social Learning Theory (Bandura, 1973), this paper examines the role of negative reciprocity beliefs and prior exposure to aggressive home culture in predicting physical aggression. Specifically, we predicted that the relationship between negative reciprocity and physical aggression is moderated by prior exposure to aggressive home culture. A total of 170 student-parent dyads from the Philippines participated in the study. Self-ratings of negative reciprocity and physical aggression were obtained. To minimize common method variance, parents were asked to rate their son's/daughter's prior exposure to aggression within the home environment. Results suggest that self-reported negative reciprocity beliefs and parent ratings of students' prior exposure to aggressive home culture were positively related to self-reported physical aggression. In addition, prior exposure to aggressive home culture moderated this relationship. Specifically, individuals with low and high negative reciprocity beliefs engaged in

greater levels of physical aggression under conditions of high as opposed to low prior exposure to aggressive home culture. The study provided preliminary evidence about the pervasive effects of aggressive cultures in predicting physical aggression even among those low in negative reciprocity beliefs. Furthermore, it constructively builds upon Douglas and Martinko's (2001) workplace aggression study by examining aggression in a non-western context and sample (i.e. university students from the Philippines), thus, demonstrating that the relationship between aggressive home culture and aggression goes beyond the workplace environment. Indeed, the family environment plays an important role in shaping an individual's personality and behavior

Keywords: *general aggression model, social learning theory, environment, home culture, negative reciprocity beliefs*

Investigating the relationship of Myers-Briggs personality dimensions with job attachment, job satisfaction, and organizational commitment

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Personality is a fairly stable characteristic in people that is the subject of different research. There is a lot of disagreement among researchers about personality definition and related dimensions. Myers-Briggs type indicator (MBTI) is recognized as a tool for determination of personality types that has acceptable validity and reliability. There are four categorized scales in MBTI with two options for each scale: extraversion - introversion, sensory - intuitive, logical - affective, and judgment - process orientation. The current research investigates the relation of these scales with three organizational variables including: job attachment, job satisfaction, and organizational commitment, assuming that each personality dimension shows a different relationship with job attachment, organizational commitment,

and job satisfaction. 270 male and female employees of one industrial company were selected by random sampling method. Subjects respond to personality scale (MBTI) questionnaire (1940), Balfour and Wechsler's organizational commitment questionnaire (1996), Kanungo's job attachment questionnaire (1992), and job satisfaction questionnaire (Juge, 2000). Data were analyzed using through regression. According to stepwise regression analyses, sensory-intuitive dimensions of personality are the best predictors of organizational commitment. However, intuitive dimensions are negatively associated with organizational commitment. Sensory-intuitive and sensitive dimensions showed negative relations. In order to predicting job satisfaction through personality dimensions, purposed just one model, including intuitive dimensions, and relations negative. Results showed some personality dimensions have significant relationships with variable such as job attachment, job satisfaction, and organizational commitment, so managers can select appropriate personality types in selection, training and succession planning.

Keywords: *personality, Myers-Briggs type indicator, organisational commitment, job attachment, job satisfaction*

Is emotional intelligence really an advantage? Investigating the relationships between emotional intelligence, leadership, and performance

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Emotional Intelligence (EI) is the aptitude of using reasoning in order to understand a person's own and others' emotions, and to manage them according to his or her will (Mayer & Salovey, 2004). Some have suggested a stronger link between EI and performance, than between any other form of intelligence and performance (Goleman, 1998). Some authors go further, and suggest that EI is the main aptitude for successful leaders (e.g. Cooper, 1997; Mayer, 2002). Notwithstanding this interest on the topic and alleged relationships with performance and

leadership, there is a scarcity of empirical support to these contentions. The current study aims to investigate the relationships between transformational leadership, EI, and performance. Data from 725 salespersons was collected in a large organization in the state-agent sector. Performance evaluations were obtained from supervisors. All together, there were 640 dyads. EI was measured with the Emotional Shutte's Inventory (Schutte, Mallouf, Hall, Haggerty, Cooper, Golden & Dornheim, 1998). Leadership was measured with the Transformational Leadership Behavior Inventory (Podsakoff, MacKenzie, Moorman & Fetter, 1990). Individual and organization-level performance measures were reported by supervisors and employees themselves, as well as from company's official records. Confirmatory factor analysis revealed an acceptable set of results with regards to the measures used in the investigation. Results indicate that supervisors' transformational leadership is positively related with EI of followers. Transformational leadership also showed a positive relationship both with extra role performance and role performance. Extra role performance is positively related with role performance. It was not possible to confirm a relationship between EI and role performance, but there is some evidence of the relationships between EI and extra role performance. There is a small significant and indirect effect of IE on extra role performance through leadership. These results confirm that leadership is still an important variable to take into account in explaining performance at its multiple dimensions. However, EI failed to reveal a strong influence on performance, which challenges some authors' views on the importance of EI in organizations.

Keywords: *emotional intelligence, performance, transformational leadership*

Is searching for meaning in life associated with reduced subjective well-being? Confirmation and possible moderators

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The aim of the present study was to explore the independence of the presence and search for

meaning in life (using the Meaning in Life Questionnaire, Steger, Frazier, Oishi & Kaler, 2006) and if searching for meaning in life reduces subjective well-being. Secondly, the study examined whether any of the three theoretical frameworks act as moderators of any possible negative impacts. Two quantitative studies were undertaken utilizing the internet. The first consisted of 106 subjects to test if searching for meaning in life does reduce subjective well-being and whether the two factors were independent. The second study, consisting of 500 subjects, examined the relationship between searching for meaning in life and subjective well-being (happiness) and further investigated the possible moderator effects of presence of meaning in life, demographic variables, self-actualization, self-efficacy and achievement motives on the relationship between searching for meaning and well-being. The first study confirmed the independence of presence and search for meaning in life and highlighted the significant relationship between happiness, presence and search for meaning in life. This study also confirmed the moderating effect that presence of meaning in life has on happiness scores when individuals are searching for meaning in life. The second study supported the initial findings and highlighted the further moderating effects of age and self-actualizing on searching for meaning in life and well-being. Overall the results suggest that individuals who are searching for meaning in life report lower subjective well-being when they hold little presence of meaning in life. As presence of meaning in life increases, the process of searching appears to be less distressing. Age, controlling for the moderation of searching by presence of meaning in life, was found to display moderating effects on happiness for individuals who were searching for meaning in life. Finally, controlling for presence of meaning in life and age, individuals' level of self-actualizing moderated the impacts of the searching process on subjective well-being. These later findings are fully interpreted within the thesis.

Keywords: *the meaning of life, subjective well-being*

Is there a relationship between parent controllability attributions and problematic behavior in children with developmental disabilities?

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The aim of the current study was to investigate the role of parental attributions of adult and child controllability as a moderator in the well-established relationship between child developmental disability and behavior problems. The influence of parental attributions of adult and child controllability on the relationship between problem behaviors and disability was explored in mothers of children with developmental disabilities (DD) ($N=20$), with a mean age of nine years and three months ($SD=24.6$ months); and in mothers of typically developing (TD) children ($N=26$) with a mean age of nine years and four months ($SD=23.7$ months). The DD group comprised 11 children with autistic spectrum disorders or communication impairments, three children with Down Syndrome, one with cerebral palsy, one with attentional problems, and four with specific or complex developmental problems. Child behavior was measured by four social interactional scales from the Child Behavior Checklist. Parental attributions were measured using a modified version of the Parent Attribution Test. Mothers were divided into higher and lower controllability groups on the basis of their responses on this test. Multivariate analysis of variance found significant group x adult controllability interaction effects for aggressive behavior, rule-breaking behavior, as well as borderline significant effects for other problems and social problems. Simple effects analysis suggested that when mothers had low attributions of adult controllability, there were indeed significantly more problem behaviors in the DD group, but when mothers had attributions of high adult controllability there was no longer any significant difference in problematic behavior between the two groups. Parent attributions of controllability may moderate the well-established effect of disability on problem behavior. Implications for parent intervention programs are discussed.

Keywords: *parent-child relationships, attribution, controllability, developmental disorders, problematic behaviour*

It's so lonely being the king of all the wild things: All Max needed was a friend...

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This paper is based on the notion that having even just one friend in a social environment significantly lowers an individual's perception of loneliness; a phenomenon found to be true for children (Renshaw & Brown, 1993). The aim of the present study is to investigate whether this conclusion can be generalised to adult employees in a workplace setting. 188 employees from a government organisation volunteered to participate in the study. Data was collected via an online survey as part of a broader longitudinal study on employee retention. The UCLA-R Loneliness scale (Hawkley, Browne & Cacioppo, 2005) was used to measure loneliness. The analysis shows that having at least one friend at work lowers the mean score of loneliness by 9.7 (31.1 for 0 friends, 21.4 for 1 or more friends, from a possible range of 12-48). Multivariate analyses also suggest that having no friends and little emotional support in the workplace, experiencing low levels of affective job commitment and feeling disengaged are antecedents of work-related loneliness, which is mediated by negative affect. It was found that having just one friend at work can be very powerful in overcoming feelings of loneliness. Lonely people tend to perceive situations and social environments through a negative lens (compared to non-lonely people), which has an effect on their ability to create and maintain meaningful relationships with those around them, perpetuating existing feelings of isolation and loneliness. Results are discussed within the contexts of (a) workplace relationship dyads and (b) the wider organisation. Suggestions and recommendations at both the individual and organisational level will be provided.

Keywords: *social environment, loneliness, workplace, job commitment, emotional support*

Job burnout in healthcare settings and productive organizations: Are call centres the most burnt-out?

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The study has investigated the comparison of job burnout and interpersonal strain levels among (a) health care operators, (b1) productive settings employees, and, within the latter, (b2) call centre agents. Literature suggests (Deery, Iverson, & Walsh, 2002; Isic, Dormann, & Zapf, 1999, Zapf & Holz, 2006) that social interactions with customers, clients (internal and external) or patients are a relevant part of the job in the service industry and sustained interpersonal interactions with people at work can lead to burnout. In particular, abusive and aggressive clients, standardized behavioural scripts in dealing with customers, emotional labour, and little discretion of call centre operators are associated with emotional exhaustion. Employees ($N=1032$) from healthcare settings ($N=503$; two hospitals, one school, one jail) and productive organizations ($N=529$; one bank, one research institute, one transportation company, one call centre), and, within the latter, from a call centre ($N=159$) returned an anonymous self-report questionnaire measuring: exhaustion, cynicism, professional efficacy (Maslach & Leiter, 1997), and interpersonal strain (Borgogni, Armandi, Amaducci, & Consiglio, 2007). Two ANOVAs investigated the differences related respectively to the type of organization: (a) healthcare and productive organization; (b) healthcare, call centres and "other productive organizations". Surprisingly, employees from healthcare settings displayed lower levels of job burnout and interpersonal strain as compared to their colleagues from productive organizations. Nevertheless, call centres operators, when separated by the other productive organizations, displayed higher levels of job burnout, and particularly of exhaustion, and interpersonal strain as compared to employees from "other productive organizations", and especially by those from the healthcare settings. Results yield support to the role of social interaction associated to different type of organizational settings, and related jobs, in explaining job

burnout. Levels of exhaustion of call centre operators, revealed as even higher when compared to healthcare colleagues, suggest the importance of further research on interpersonal factors and management of emotions. Implications for interventions are discussed.

Keywords: *job burnout, health care providers, productive settings employees, call centre, interpersonal factors*

Job design, social support, and self-efficacy among technical workers in Malaysia: Their effects on job satisfaction and turnover intentions

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The purpose of this study is to examine the impact of job design variables (job demands and job control), social support, and self-efficacy on job satisfaction and turnover intentions among technical workers in Malaysia, a country characterized as collectivistic with high power distance culture. This study also tested the moderating effects of job control, social support, and self-efficacy in the relationships between job demands with job satisfaction and turnover intentions. A non-experimental two-wave panel design with a six-month time interval was used in this study. Data were obtained from 429 technical workers at Time 1 and 245 at Time 2 in a large telecommunication company in Malaysia. Multivariate analyses were used to examine the direct and moderating effects hypotheses. The results showed that job design factors, social support, and self-efficacy were significantly related to job satisfaction and turnover intentions. The results also indicated that supervisor support and self-efficacy functioned as moderators. However, job control did not functioned as a moderator. These findings provided support for certain aspects of theoretical models and practical implications of job design in the collectivist Malaysian culture.

Keywords: *job demands, job control, social support, self-efficacy, job satisfaction*

Knowledge and coping among Latina breast cancer survivors in the U.S. with Lymphedema

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More women in the U.S. are living with breast cancer than with any other cancer. One aspect of recovery that has been neglected in the literature is the recovery of Latina women who have developed Lymphedema. To address this gap, we developed a study that focuses specifically on this population. In this qualitative study, we conducted individual phone interviews with 10 Latina breast cancer survivors who have developed Lymphedema. Following a semi-structured interview guide, we obtained information about their daily lives, onset of Lymphedema, and how they cope with the stress that arises from their experiences with the condition. The interviewer, an advanced doctoral student in counseling psychology, was fully bilingual. Based on women's preferences, she conducted four interviews in English and six in Spanish. Each interview lasted approximately 1.25 hours. Using a thematic analysis methodology (Ely et al., 1991), two advanced graduate students who were also fully bilingual coded the transcripts in their original language under the supervision of a senior faculty member. Transcripts were typed verbatim from the audiotaped interviews. Two themes that emerged from the data will be highlighted in this presentation: knowledge of Lymphedema and coping strategies. Women had very little knowledge of Lymphedema, experiencing the symptoms but not evaluating them as such. Their families and friends also neglected to recognize their symptoms as possible signs of Lymphedema. Social support was critical to women's coping process. Types of support women accessed included emotional, informational, and instrumental. Other coping strategies included downward comparison (comparing themselves with other survivors who are worse off), and active, passive, and avoidant coping. Through this study, we brought to light information that can be used to develop effective psycho-educational programs for Latina breast cancer survivors with Lymphedema. For

example, we will present on key signs and symptoms that women, their families, and friends need to know to recognize they may be developing Lymphedema. Also, there are strategies women can learn to gain and harness various types of social support, and ways in which organizations can provide the support as well. In the presentation, we will include specific recommendations for types and sources of support women should have available to them. This information has great potential to improve the quality of life of Latina breast cancer survivors in the U.S., a population that has traditionally been neglected in the literature.

Keywords: *breast cancer, Latina women, Lymphedema, coping strategies, knowledge*

Leadership as sensemaking for capacity building

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This paper provides a framework for understanding leadership amongst institutional actors involved in restorative interventions in fragile states. The paper draws on the sensemaking literature to propose an integrative four point framework for an alternative understanding of how leadership can function in the complex environments of restorative interventions in fragile states. The method is qualitative and uses case analysis. An important foundation for effective leadership is an understanding of the professional and social identities of the key actors involved in the situation. These identities represent bodies of acquired knowledge and expertise that go to framing a conflict in certain ways. Recognition that different understandings are socially constructed underpins the capacity to generate insight into the drivers of the conflict in its local context. Sensemaking addresses the way in which cultural assumptions can be enmeshed with competition for power and resources. These insights are necessary to generate accounts of the complex and dynamic interconnectedness between sets of actions and consequences in these situations. These

accounts eventually can be shaped into new narratives to identify and justify action. These emergent narratives create platforms around which to construct opportunities for shared leadership. Capacity building for sustainable peace is often initiated by peace keeping forces that have a military or paramilitary role and their early actions and the manner in which they can share leadership with other key actors can significantly influence the creation of subsequent opportunities for sustainable development. Key actors in the intervention process are drawn from a range of defence, diplomatic, aid and business institutions and their capacity for shared leadership is instrumental in sustainable capacity building. The complex nature of any intractable protracted conflict poses some severe challenges for traditional assumptions about how leadership might operate particularly where leadership is perceived as a phenomenon that resides within selected individuals with an organisational authority structure. This sensemaking approach offers distinct alternatives to the way leadership is defined by particular paradigms such as the charismatic and transformational approaches. The paper provides some implications for the preparation, composition and design of leadership teams involved in restorative interventions in fragile states.

Keywords: *leadership, sensemaking, restorative interventions, fragile states*

Learning and memory impairments in preclinical Huntington's disease

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Episodic memory difficulties are commonly reported in manifest Huntington's disease (HD). There is evidence of deficits in the encoding, storage, and retrieval stages of learning and memory. However, it has not been shown whether episodic memory is impaired also in preclinical carriers of the HD gene mutation, and if so, which stages of memory are affected. The aim of this study is to investigate verbal episodic memory in preclinical HD. Seventy

presymptomatic participants were recruited from the predictive testing program for HD at Karolinska University Hospital, Stockholm, Sweden. A regression equation based on number of CAG repeats was used to estimate the mean years to disease onset of the carriers. This yielded three groups: carriers with less than 12 years to disease onset (HD+close, $n=16$), carriers with 12 years or more to disease onset (HD+distant, $n=16$), and noncarriers (HD-, $n=38$). All participants completed a Fuld Object Memory Evaluation with selective reminding, which elaborates the processing of stimuli. Participants were asked to identify and name 16 covered objects by touch, thereafter they were shown each object and presented with its name. After this tactile and visual presentation and verbal naming, participants were asked to recall all objects. They were then reminded of all objects not recalled, and again asked to recall all objects. A total of five recall trials were administered. The HD+close group encoded significantly fewer objects, stored fewer objects in long-term storage, retrieved fewer objects from long-term storage, and found reminders less helpful than the HD- group. No significant differences were found between the HD+close group and the HD+distant group, and between the HD+distant group and the HD- group. The results suggest that verbal episodic memory is impaired in the preclinical phase of HD before motor symptoms become evident, and indicate that deficiencies in storage and retrieval contribute to the impairment. These impairments affect HD asymptomatic carriers and reflect dysfunction of striatum, frontal cortex, and fronto-striatal circuits more than a decade before manifest symptoms.

Keywords: *episodic memory, Huntington's disease, learning impairments, memory impairments*

Lifestyle choices: Utility for alcohol and unhealthy food

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Many college students start to experience their first independent living and make lifestyle choices such as diet, physical activity, and alcohol use that can have life-long health

implications. University students generally do not comply with the Dietary Guidelines for Americans, exercise too little, and drink too much. The persistence of unhealthy lifestyles among college students, who know better, constitutes a puzzle for researchers. In this study, we employed a descriptive version of the classical Multi-Attribute Utility (MAU) model to examine whether the perceived utilities of alcohol use and unhealthy food intake were associated with alcohol usage and eating behavior in this population. Participants ($n = 427$) completed questionnaires including measures of alcohol use, one-week food intake log, perceived consequences of alcohol usage and unhealthy eating behavior, stress, depression, and personality. Three MAU model parameters for each consequence (subjective value, likelihood of occurrence, and importance at the moment of decision) were elicited. Results for the two outcome measures (alcohol use and eating behavior) were consistent, in that mean MAU scores for alcohol were significantly higher for those who reported past month alcohol use than for those who did not, and mean MAU scores for unhealthy food were significantly higher for those who reported eating more unhealthy food than for those who ate less unhealthy food. Similarly, the adjusted odds ratio for alcohol use was 1.81 (95% CI= 1.22-2.68) indicating MAU scores (more positive perceived consequences of alcohol use) was significantly associated with increased alcohol use. The adjusted odds ratio for food intake was 1.08 (95% CI= 1.01-1.16) indicating MAU scores (more positive perceived consequences of fast food) was significantly associated with increased unhealthy eating behavior. The descriptive MAU model now has empirical support for the domains of alcohol use and eating behavior. Poor choices are not the result of irrational thinking, but reflect how those choices are affected by multiple consequences. Better understanding of the decision making process of alcohol use and eating behavior may be beneficial in promoting healthier lifestyles for college students.

Keywords: *alcohol use, eating behaviours, college students*

Loneliness and impulsivity in delay discounting

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Previous studies have found that social exclusion from immediate surroundings impairs self-regulation, and thus promotes impulsive behavior, such as overeating (e.g., Baumeister et al., 2005). However, there is little evidence in the power of the subjective feeling of social exclusion, such as loneliness, on impulsivity. The present study investigated the impact of a chronic feeling of loneliness on how people prefer immediate but smaller rewards, or delayed but larger rewards in a delay discounting task. A total of 106 university students were enrolled in the experiment. After completing the revised UCLA loneliness scale (Russel, Peplau, & Cutrona, 1980), participants answered the Monetary Choice Questionnaire (MCQ; Kirby, Petry, & Bickel, 1999) that contains fixed set of 27 choices between smaller, immediate rewards (e.g., 3000 yen today) and larger, delayed rewards (e.g., 5000 yen in 120 days). Discount rates (k) of each participant were estimated separately for the amount of rewards (small, medium, large, and the whole) based on patterns of choices in MCQ, and served as the index of impulsivity. A larger discount rate (k) indicates the preference for immediate, impulsive choices. Loneliness was negatively correlated with discount rates of medium, large, and the whole rewards (-.21, -.24, and -.21, $ps < .05$). People with high loneliness tended to be reflective in relatively larger monetary choice situations. Contrary to the previous findings of social exclusion and self-regulation, loneliness did not increase impulsivity. Direct comparisons between temporal and chronic social exclusion in delay discounting should be conducted in future studies.

Keywords: *self-regulation, impulsivity, social exclusion, loneliness, delay discounting task*

Longitudinal investigation of objective and subjective indicators of socioeconomic status in the elderly

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A large body of health care literature points to the importance of considering the effects of socioeconomic inequalities on health (Marmot, 2004). The primary aim of the present study is to investigate the role of both objective and subjective indicators of socioeconomic status (SES) in explaining health disparities over time among older adults. Data were drawn from the New Zealand Longitudinal Study of Aging, with complete data available for 1765 participants (Mean age = 61.16 years; $SD=4.47$). SES and demographic data were taken from 2006 (Time 1) and health data from 2006 and 2008 (Time 2). SES Markers: objective SES was assessed by two proxies – income and education, and subjective SES was measured by economic living standards index. Health Markers: Physical and mental health from Short Form 36, self-rated health and health-risk behaviours were used to assess health status. Various demographic variables were also measured. In comparison to objective SES (assessed by income and education), subjective SES (assessed by perceived economic living standards) came out to be a significant predictor of an array of health outcomes. Hierarchical linear regressions suggested that low subjective SES at Time 1 significantly predicted decrements in health at Time 2, after controlling for sociodemographic characteristics and baseline scores of health outcomes. The concept of economic living standards (as indexed by subjective SES) takes into account the different daily living circumstances and social experience in which people may use income and assets, including different needs and subjective aspirations. Thus, subjective SES is a better longitudinal predictor in explaining the health disparities in older adults than objective SES.

Keywords: *objective indicators, subjective indicators, socio-economic status, elderly*

Longitudinal study of Aussie optimism: Positive Thinking Program in preventing internalising disorders in 8-9 years old children

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The Aussie Optimism: Positive Thinking Program (AOP-PTS) is an innovative curriculum-based mental health promotion program based on cognitive and behavioural strategies. The program is aimed at preventing depressive and anxiety symptoms and disorders in middle primary school. The post-test, six month, 18 month, 42 month and 54 month outcomes of this new universal program on Year 4 children from Western Australia were investigated. Twenty state primary schools were randomly selected to receive the program implemented by teachers or to a control condition involving their regular Health Education curriculum. There were 435 children who participated in the intervention condition and 407 children who were in control condition. Initial results showed that there were significant differences in depression at post-test, and attributional style at post-test and six month follow-up. In addition, at immediate post-test, participants in the intervention group were less likely to receive a clinical diagnosis of a depressive disorder in comparison to those in the intervention condition. These results provide early evidence that AOP-PTS is associated with resilience in children from low SES backgrounds, and has the potential to prevent depressive disorders and decrease depressive symptomatology.

Keywords: *Optimism, Aussie Optimism: Positive Thinking Program, primary school, children, depression*

Lose to win: A national workplace weight management program

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In Singapore the prevalence of obesity (BMI 30) among adults increased from 5.1% in 1992 to 6.9% in 2004 while the prevalence of overweight (BMI 25 – 29.9) increased from 21.1% in 1992 to 25.6 % in 2004. BMI stands for Body Mass Index which measures the amount of body fat, to

assess the level of risks of developing obesity-related health problems. The higher the BMI, the higher was the amount of fat in the body. Studies have shown that a well-planned workplace health promotion (WHP) program contributes both directly and indirectly to a company's bottom-line by boosting productivity, improving presenteeism, improving health-related behaviour and staff morale while reducing healthcare costs and absenteeism. In 2009, the annual National Healthy Lifestyle Campaign (NHLC) focused on obesity. As part of the campaign, a 12-week weight management challenge called *Lose to Win* was held. A reality TV program was also produced in conjunction with the challenge. *Lose to Win* was designed as a team-based challenge for workplaces. This setting encouraged the use of peer support to foster and sustain behaviour change. All interventions (fitness assessment, nutrition workshops & boot camp-style exercises) were evidence-based. Incentives such as cash prizes, trophies, recognition and time-off from work to attend the sessions were some of the levers used. *Lose to Win* challenge teams comprised 5 members each, with members coming from the same company. The workplace health facilitators screened staff for eligibility and readiness to participate. The participants were selected based on their Body Mass Index (BMI) being 25 kg/m² and above. A BMI of 25 kg/m² and above is classed as being in the medium to high risk category (based on the WHO-validated Asian BMI cut-offs) for developing diabetes and cardiovascular disease. With 60% of the population in the workforce, this setting was ideal for this challenge. Participants went through three Fitness Assessments, three Interactive Nutrition Workshops and 21 Boot Camp style exercises (11 Aug to 31 Oct 09). Follow-up activities and evaluation will be conducted at 6 and 12 months. Results of the 12-week program showed extremely positive outcomes. Participation rate was 86.3% of which 94% reported weight loss and 88% reported body fat loss. All participants reported increased fitness levels from the first to final assessment. Results on the pre and post challenge questionnaire as well as the follow-up evaluation will be available at the conference. The average ratings for the reality TV show ranged from 2.7%-8.1% and reached more than 1.6 million viewers. Compared to similar health-related

reality TV programs, *Lose to Win* achieved higher ratings with 1.4%-3.5% more viewers. In addition, healthy lifestyle activities featured and promoted in the TV show saw increased participation at local community centres. The success of this national workplace weight management program has engendered a lot of interest in the community as a result of the TV reality program. The plan is to bring together this initial group of participants at 12 months for a face-to-face meeting as part of the follow-up. A similar program for the community is being planned for 2010.

Keywords: *obesity, workplace health promotion, productivity, absenteeism*

Managing organisational change and trust: The importance of ideological and casual social accounts

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This paper will look at two of Cobb and Wooten's (1998) types of social accounts in particular causal and ideological accounts. Social accounts are concerned with the contents of communications, and aims to make sure the receiver understands the decision in its entirety. The use of social accounts as a means of providing an explanation to employees of the change decision has been found to increase trust and commitment in the organisation during the change implementation (Tucker et al, 2010). Put simply, causal accounts explain the problems which have led to the need to change whilst ideological accounts project the long term goals highlighted by the decision to implement change. This research consists of a case study, based in a German manufacturing organisation which has recently introduced a production change including new technologies as part of a five year change programme. From this case, qualitative data (interviews and focus groups), and quantitative data (field questionnaires) were collected and analysed. An experimental study compared causal and ideological accounts using a hypothetical merger scenario (as used by Giessner et al, 2006) creating a controlled and isolated setting to determine the role which each account played in the trust and

commitment relationship, independently of the other accounts. This case study found that ideological accounts were best at maintaining trust and mediated the relationship between ideological accounts and organisational commitment. This paper will demonstrate that whilst the relationship between ideological accounts and organisational commitment were mediated by trust, the relationship between causal accounts and commitment was mediated by both procedural justice and trust independently. These findings have several implications for organizations embarking on a period of major change. This paper highlights the importance 'cause and effect' motives for a major organisational change. In particular, it is important to ensure the correct aspects of the social account reaches all levels of the organisational hierarchy such that the explanation for change can be easily identified by employees. Specifically, when organisations need both a causal and ideological account and when one is sufficient.

Keywords: *social accounts, causal accounts, organisational change, organisational trust*

Measurement of functional outcomes: Toward the development of an item bank in Australia

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This paper outlines a program of work into developing an item bank for the measurement of outcomes in the domains of functional abilities and social participation in Australia. Important treatment outcomes in the area of human functioning include basic and instrumental Activities of Daily Living (ADLs) and social participation outcomes. Central to this enterprise is the development of short and routinely usable measures which are uni-dimensional in structure and applicable across disease and client groups. A particular focus of this work will be on neurological and trauma patients. The Centre for Health Service Development (CHSD) has a fifteen year history in the development of functional instruments,

having built the Australasian Rehabilitation Outcomes Centre (AROC) Data Bureau for the Australasian Faculty of Rehabilitation Medicine (AFRM) and a nine-item functional screen for the national Home and Community Care (HACC) program (For further details see papers by Simmonds & Stevermuer, 2008; Eagar, Owen, Marosszeky & Poulos, 2006). In seeking to develop the operational parameters for the proposed item bank, this work will utilise existing large datasets developed by CHSD, including: SF-36v2 Physical Functioning data; Functional Independence Measure (FIM) data from the AROC database; and data on the use of the HACC functional screen. Following the development framework of Cella, et al. (2004) this work will review and identify common items and scales, and then analyse the items for dimensionality and fit. Suitable items will then be calibrated on a continuum of functioning with any construct difficulties being identified. The relationship between items based on self-report, clinical rating and proxy ratings will also be examined. This work will contribute to psychological assessment practice by developing short measures of basic and instrument (ADLs) and participatory function which can be combined with standard psychological tests (e.g. IQ and depression symptom measures). Test scores after injury or post psychological treatment can then be examined using a framework of common measures. This will be a contribution to understanding 'real world' outcomes for people with disabilities in terms of their level of functioning and limitations to their social participation.

Keywords: *functional abilities, social participation, Activities of daily life (ADL)*

Measuring alcohol craving: Development of the alcohol craving experience questionnaire

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The aims were to develop a robust measure of craving based on the Elaborated Intrusion Theory of Desire (EI) (Study 1) and to examine the construct, concurrent, discriminant and

predictive validity of the instrument (Study 2). One hundred and fifty individuals (Study 1) and two hundred and ninety-nine individuals (Study 2) receiving treatment for alcohol use disorders, completed the Alcohol Craving Experience Questionnaire (ACE). The ACE consisted of questions focusing on the intensity and frequency of sensory aspects of craving (imagining the taste, smell, and somatic sensations of drinking), strength of craving and intrusive cognitive aspects of craving. Study 2 also included a sample of non-treatment seeking ($N = 204$) university students. Exploratory factor analysis demonstrated a clear three-factor structure representing Imagery, Strength and Intrusion. Confirmatory factor analysis supported the three factor structure. Concurrent validity with the Obsessive Compulsive Drinking Scale (OCDS) and with measures of alcohol consumption, alcohol dependence severity, depression, anxiety and stress (DASS), and alcohol expectancies (DEP) was demonstrated. The ACE discriminated between individuals in the clinical and non-treatment groups and between those who screened positive for alcohol dependence on the AUDIT and those who did not. The ACE was associated with an increase in days of abstinence at three month follow-up. Overall, the ACE performed well as a robust measure of craving. Further research could explore the application of this instrument with other alcohol using populations, for example, non-treatment seeking drinkers and heavy episodic alcohol consumers. Modifications of the ACE could be tested with other addictive substances.

Keywords: *alcohol craving experience questionnaire, elaborated intrusion theory of desire, validity*

Measuring driver fatigue on short regular trips

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Driver fatigue is recognised as a major cause of road crashes, and has recently received more attention as an occupational health and safety issue. However, driver fatigue remains quite difficult to measure, with many crashes listing

fatigue as a cause simply in the absence of other more obvious causes, like speed or alcohol. While long trips have been the focus of campaigns regarding driver fatigue, self-report investigations indicate that fatigue also occurs on short trips (e.g. commuting). This project aims to objectively measure fatigue on short trips, using a new device ("Optalert") that records eye blinks as an index of drowsiness. Following a training session in a driving simulator (STISIM system), 30 participants, who work at UNSW, drove for 2 short trips, mimicking their regular morning and afternoon commute (approximately 30-45 minutes). The order of morning and afternoon trips was counterbalanced across participants. The Optalert system was used to record drowsiness. Self-report measures of fatigue were collected using a questionnaire, along with all driving performance measures available from the simulator (speed, lateral position). An actiwatch was worn by participants for 2 nights prior to test sessions, to measure the amount of sleep the participants had. Results will be discussed in terms of how drowsy participants were according to the Optalert algorithm, and relate this to driving performance. The potential for more objective measurement of driver fatigue could help refine road safety strategies about the importance and occurrence of fatigue on different types of trips.

Keywords: *driver fatigue, Optalert system, drowsiness, driving performance*

Measuring living standards and assessing the wellbeing of older people

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The aim of this research program, entitled 'Enhancing Wellbeing in an Ageing Society' (EWAS), is to identify the drivers of wellbeing and quality of life among the older population. Amartya Sen's capabilities approach has formed the conceptual basis of the theoretical framework of this research program (Sen, 1999). Subjective measures that complement Sen's emphasis on the importance of human freedom were included to balance the otherwise

objective, material emphasis of the capabilities approach. An extensive survey of a national random sample of 1680 older New Zealand citizens aged between 65 to 84 years was carried out using computer assisted technology interviewing (CATI). A theory-driven approach to the survey questionnaire construction led to the selection of the domains of wellbeing, which included living standards (income, housing, poverty measures), were chosen to highlight wellbeing capabilities, functionings, instrumental freedoms and needs. These variables were correlated with a range of subjective wellbeing measures, including the World Values Survey Life Satisfaction Question and satisfaction with their economic standard of living. The results are broadly congruent with most international studies. Personal income and wealth were both significantly associated with gender, age, marital status and education. Subjective assessments of living standards were generally in line with the results of the objective indicators. The poverty measures showed that a large percentage of older people on lower incomes clustered between the standard internationally accepted 50 and 60 percent of median, household income thresholds. Home ownership was very high. With regard to the living standards domain, subjective wellbeing was significantly associated with higher personal income and home ownership. The findings point to the importance of current income support and home-ownership for older people to meet their essential needs and services and to their assessment of their wellbeing and quality of life. For at least a third of the elderly population both income support and home ownership depend upon current policy settings and thus political will. These results raise important issues about the continued levels of wellbeing among older people as the 'baby boomers' begin to double the proportion of the population who are 65 years and over.

Keywords: *well-being, quality of life, ageing, living standards*

Measuring progress in student achievement

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Educational assessment is usually restricted to measures collected at a single time point. When it comes to gaining estimates of learning and achievement changes this is clearly insufficient. For many applied purposes such estimates are warranted. However, gaining such estimates is laborious and challenging. Nevertheless, change in achievement is the parameter of pivotal applied interest. In the present study we investigate antecedents, covariates and consequences of changes in student achievement. Our research questions are focused on understanding change in student achievement in German (mother tongue) and Mathematics. About 150 ninth graders were recruited. Apart from two pre- and two post-test sessions they complete 40 test sessions of two hours – approximately every 2 weeks. In each testing session participants complete nationally calibrated measures of student achievement in German and Mathematics. Additionally, they complete two blocks of automatically generated parallel tests of three working memory tasks (N-back, Alpha-span, Memory updating). Finally, participants complete a variety of questionnaires on school-related behaviour and achievement related personality traits repeatedly. A control group only completed the pre- and post-test sessions. In preliminary analysis for the first 14 measurement points, we found growth in all domains. Change factors for mathematics and working memory from growth curve models were positively correlated. We will report results from 22 measurement points (the first year of the study) focusing on change in Mathematics achievement and its covariates. We will discuss the structure of Mathematics achievement and its covariates by focusing on the status quo and changes in terms of inter- and intra-individual variation. We will suggest new applications in the monitoring of student progress and discuss hints on early indicators of school problems.

Keywords: *educational assessment, learning, student achievement, personality traits*

Measuring subjective workload using the NASA-TLX: A proposed methodology for scale modification for use in the land vehicle domain

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One of the most widely-used, self-report measures of operator workload is the NASA-Task Load Index (TLX) (Hart & Staveland, 1988). It consists of six subscales (Mental, Physical, and Temporal Demands, Frustration, Effort and Performance). In the last 20 years the NASA-TLX has been favoured in a variety of research contexts for its simplistic administration and ease of interpretation. Its adaptation to vastly different fields of investigation has resulted in modifications to the original subscale descriptions, and in some circumstances, the subscales themselves. However, the process of modification of the NASA-TLX to better suit specific domains has not been well documented within the literature. The aim of this presentation is to discuss a methodology for adapting the NASA-TLX to specific research domains, using vehicle evaluation as a case study. The aim is to adapt the NASA-TLX to increase its sensitivity to operator workload issues arising from differences between vehicles and associated vehicle systems. A total of 42 drivers completed the NASA-TLX on multiple occasions, over a range of driving courses and using multiple vehicles. In addition, drivers provided descriptions of what a rating of 'Very Low' or 'Very High' would mean to them within each of the six workload subscale categories. The quantitative workload data did not differentiate between vehicles. A qualitative analysis of the driver subscale interpretations showed considerable repetition of themes across the subscales, suggestive of intercorrelations between the subscales. This was supported by the data with significant intercorrelations between all subscales and strong positive correlations between the physical, mental and temporal subscales. While intercorrelations between subscales can be explained in terms of the original NASA-TLX design, the lack of observed sensitivity of the tool leads us to investigate the utility of more specific subscale descriptions. The qualitative data collected in this study will be used to modify the NASA-TLX subscale descriptions for use in a future vehicle evaluation activity. A comparison of original versus modified subscale descriptions will be performed in order to

identify any enhancement of vehicle evaluations in terms of workload assessment arising from these modifications.

Keywords: *operator workload, NASA- Task Load Index, vehicle evaluation, workload assessment*

Measuring the effect of motorcycle rider training on psychosocial influences for risk taking

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Whilst motorcycle rider training is commonly incorporated into licensing programs in many developed nations, little empirical support has been found in previous research to prescribe it as an effective road safety countermeasure. It has been posited that the lack of effect of motorcycle rider training on crash reduction may, in part, be due to the predominant focus on skills-based training with little attention devoted to addressing attitudes and motives that influence subsequent risky riding. However, little past research has actually endeavoured to measure attitudinal and motivational factors as a function of rider training. Accordingly, this study was undertaken to assess the effect of a commercial motorcycle rider training program on psychosocial factors that have been shown to influence risk taking by motorcyclists. 438 motorcycle riders attending a competency-based licence training course in Brisbane, Australia, voluntarily participated in the study. A self-report questionnaire adapted from the Rider Risk Assessment Measure (RRAM) was administered to participants at the commencement of training, then again at the conclusion of training. Participants were informed of the independent nature of the research and that their responses would in no way affect their chance of obtaining a licence. To minimise potential demand characteristics, participants were instructed to seal completed questionnaires in envelopes and place them in a sealed box accessible only by the research team (i.e. not able to be viewed by instructors). Significant reductions in the propensity for thrill seeking and intentions to engage in risky riding in the next 12 months were found at the end of

training. In addition, a significant increase in attitudes to safety was found. These findings indicate that rider training may have a positive short-term influence on riders' propensity for risk taking. However, such findings must be interpreted with caution in regard to the subsequent safety of riders as these factors may be subject to further influence once riders are licensed and actively engage with peers during on-road riding. This highlights a challenge for road safety education / training programs in regard to the adoption of safety practices and the need for behavioural follow-up over time to ascertain long-term effects.

Keywords: *motorcycle, risk taking, psychosocial factors*

Mediated moderation or moderated mediation? Relationship between length of unemployment, coping styles, dispositional resilience, and social functioning of unemployed Venezuelans

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The aim of the present study was to evaluate a model of mediated moderation vs. moderated mediation that could explain the relationship among the length of unemployment (as a stressful factor), dispositional resilience, coping styles, and social functioning of unemployed Venezuelans. Self-report measures were administered to a sample of 328 unemployed residents of Caracas, Venezuela, that were looking for a job in public and private employment agencies. The questionnaires assessed: sex, age, the length of unemployment in months, coping styles: rational, emotional, detachment, and avoidance (Copying Style Questionnaire, Roger, Jarvis y Najarian, 1993), self-esteem (Rosenberg, 1965), optimism (Scheier y Carver, 1985), mastery (Pearlin et al., 1981), and the subscale of social functioning of the General Health Questionnaire-28 (Goldberg, 1972). A composite measure of dispositional resilience was created using the scales of self-esteem, optimism and mastery following Wamberg (1997). Using the analytic strategy proposed by Muller, Judd & Yzerbyt (2005) there were conducted regression equations to

evaluate at the same time the role of the measure of dispositional resilience as a moderator in the relationship between length of unemployment and social functioning, a process that should be mediated by coping (mediated moderation), an a second process in which the relationship between length of unemployment and social functioning is mediated by coping, with dispositional resilience acting as a moderator of the meditational role of coping (moderated mediation). These regressions show that people with greater dispositional resilience use more detach coping when unemployment is longer, while people with poorer dispositional resilience in the same situation use less avoidance coping (two simple moderations). More important, dispositional resilience acts as a protective moderating factor between longer periods of unemployment and social functioning, a process mediated by detachment coping (a mediated moderation). No evidence of moderated mediation was found. In conclusion, dispositional resilience seems to work as a protective factor for the social functioning of this sample of Venezuelan people experiencing unemployment. Finally, dispositional resilience works as a protective moderating factor and detachment coping as a mediator in the relation between the length of unemployment and social functioning of the sample, a process defined as mediated moderation.

Keywords: *mediated moderation, moderated mediation, unemployment, coping styles, social functioning*

Medication alliance: Development and implementation of a mental health staff training program for the enhancement of patient medication adherence

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Patient non-adherence to prescribed medications remains a major hurdle in the effective delivery of health care services for people experiencing chronic illnesses. Non-adherence rates are particularly high among those with major mental health problems. The aim of this research was to investigate barriers to the implementation of adherence interventions, in particular, clinician skills,

attitudes and knowledge, as well as describing a potential strategy to overcome these barriers. This research incorporated three phases. Firstly, mental health clinicians were surveyed using a series of cross-sectional studies to investigate the relationship between their beliefs and knowledge with respect to medications and adherence, and their self reported efforts to enhance patient adherence. Secondly, a clinician training program (*Medication Alliance*) was developed based on belief and knowledge deficits found in phase one and this was evaluated with a sample of mental health professionals. In the third phase, a sample of patients with mental health problems were assessed for changes in adherence behaviour and mental health status following the training of their mental health care provider in Medication Alliance. The first phase of research indicated that poorer knowledge and more negative attitudes were associated with the extent to which mental health clinicians sought to enhance patient adherence. The second phase of research provided significant evidence that Medication Alliance training improved clinician skills (CBT), knowledge and attitudes with respect to the enhancement of patient adherence. In the third phase, the data indicated that patients of clinicians who had received Medication Alliance training experienced an improvement in both their adherence and their mental health. A model was developed from the data which explained this improvement in terms of the therapeutic alliance and patient insight. Efforts to enhance patient adherence to treatment should include a focus on the 'front-line' clinicians delivering mental health services. Appropriate attention to clinician skills, attitudes and knowledge can enable the improvement of patient adherence to treatment. Larger studies across chronic health domains are needed to substantiate these findings.

Keywords: *patient medication, mental health, training, attitudes*

Membership stability and performance: A study of baseball clubs and laboratory groups

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This paper aims to analyse the effect that membership stability and group boundary have upon group performance. Using Chinese Professional Baseball League (CPBL) data (Seasons 2003-2007), Study One reveals that the membership stability of baseball clubs was correlated with their annual rank and win-probability, and that stable teams outperformed unstable teams. Membership stability also predicted win-probability in four of five seasons. Using undergraduate students, Study Two reveals that members from unstable groups (i.e. groups with higher membership-turnover) had higher intention of leaving their groups and more departures. Members from stable groups had better group performance, group cohesion, and group dynamics, which all resulted in members displaying more trust in their colleagues and an increased willingness to cooperate with them. Implications of the findings are that stable membership is a crucial factor in the promotion of group dynamics and overall performance, and that the nature of a group's boundary affects its membership turnover. Policies should also be devised to manage membership stability, as maintaining an appropriate turnover rate is essential to both individuals and groups, such as employees and their organizations.

Keywords: *boundary, group membership, stability, performance*

Men who abuse their partners: Aggression and empathy

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Aggressive behaviour and empathy are clinical and forensic criteria of importance in the evaluation of men who abuse their partners in the home. In this work we offer the results of a correlational study between the variables of the AQ (Aggression) questionnaire and the variables of the IRI (Empathy) questionnaire with the stated study population. The sample comprised 130 men who had abused their partners. Academic background included: primary education (15%), secondary education (34%), professional training/high school education

(31%) and university education (20%). The instruments used were the: (1) Aggression Questionnaire (AQ, Buss and Perry, 1992) which measures four factors (physical aggression, verbal aggression, anger and hostility), and (2) Empathy Questionnaire (IRI, Interpersonal Reactivity Index; Davis, 1980, 1983) which measures four factors (Fantasy (F), Perspective taking (TP), Empathetic concern (PE) and Emotional Distress (ME)). We followed a multivarious form of analysis: factor and correlational analysis. We offer the results of the factor analysis for each factor, internal consistency (Cronbach Alpha) and the correlation between measures of the different factors of the IRI and AQ questionnaires. From the empathy questionnaire (IRI), we obtained two sub-questionnaires, each with two factors: (A) Questionnaire IRI-A, 2 factors: Empathetic Fantasy (25%; $r = .76$) and Perspective Taking (20%; $r = .69$); Explained variance = 45% and (B) Questionnaire IRI-B, 2 factors: Empathetic Involvement (23%; $r = .71$) and Personal Distress for Empathy (21%; $r = .60$); Explained variance = 44%. From the aggression questionnaire (AQ), we obtained two sub-questionnaires, each with two factors: (A) Physical Aggression (33%; $r = .78$) and Anger (16%; $r = .71$); Explained variance = 49% and (B) Hostility (30%; $r = .81$) and Verbal Aggression (20%; $r = .67$); Explained variance = 50%. From the correlational analysis of the measures of the different factors, we noted that the factor for physical aggression correlated positively with the factor for personal distress ($r = .20$; $p \leq .01$) and negatively with perspective taking ($r = -.29$; $p \leq .001$) and empathetic involvement ($r = -.17$; $p \leq .025$). The factor for perspective taking correlated negatively with anger ($r = -.14$; $p \leq .025$) and hostility ($r = -.21$; $p \leq .01$). Conversely, the factor for personal distress for empathy correlated positively with anger ($r = .34$; $p \leq .001$) and hostility ($r = .41$; $p \leq .001$). The data which we found in this work significantly support the convergent validity for the combination of the variables of the aggression questionnaire (AQ) with the variables of the empathy questionnaire (IRI).

Keywords: *aggressive behaviour, empathy, abuse*

MENDS and relationship crisis: The hostile alienation syndrome

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Longitudinal research confirmed that compared to their ex-partners, men fare poorly in several measurable areas after a relationship breakdown and take longer to reconstitute healthy and productive lifestyles (Jordan, 1996). The reasons for this inform core component of the MENDS (Men Exploring New Directional Strategies) program and what has been identified as the Hostile Alienation Syndrome. Subsequent suicide research in Australia confirmed the need for a pro-social initiative to assist the high numbers of men who were suiciding in the midst of relationship crises (Cantor & Slater, 1995). This paper reports the outcomes of the first 10 years of operation of MENDS to assist men ($N > 1100$) in significant relationship crisis. MENDS utilised an AB design for assessment of key high risk functioning (e.g. suicidality, depression, anxiety, social support etc). Comparisons of before and after PAI measures have statistically corroborated client and facilitator reports of notable participant improvements over the program period. The 12 x 2 hours/ week program focused on client self-auditing in order to address issues identified by John Gottman (Gottman & Silver, 1999) and responded to specific client needs such as physical and emotional health risks, personal and social skills, legal issues, as well as parenting and relationship training. Targeted assessment confirmed the value of the structured program approach, for up-skilling in areas of emotional processing; particularly self-management of anger and risks of acting out. Latest research (largest sample size to date) demonstrated positive treatment effects with a range of problematic functioning including, depression, anxiety, suicidality, self-medicating with alcohol/drugs and general stress levels.

Keywords: *males, relationship crisis, men exploring new directional strategies (MENDS), structured program, problematic functioning*

Mental representations (MR) of parenthood in infertile couples during their puerperal period after artificial

reproductive techniques (ART) conception

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Investigation of mental representations (MR) during puerperal period in couples who achieved conception after artificial reproductive techniques (ART) is not very common. We intended verify if infertility can cause an emotional distress influencing the mental representations of the future parenthood; to verify if exist evident gender differences considering the cause of infertility (masculine, feminine, both of them, idiopathic), the length of treatments and their different levels (Intra Uterine Insemination-IUI; In Vitro Fertilization-IVF or In Vitro Fertilization with Intracytoplasmatic Sperm Injection-ICSI) and the amount of failures. We recruited 21 Italian couples submitted to ART to the NHS University Centre of Florence Hospital who achieved pregnancy and we administered them a psychological protocol including an interview about mental representations (IRMAG for mothers and IRPAG for fathers) during third trimester of pregnancy. Interviews include 47 questions about pregnancy experience and parenthood expectations. Interviews transcripts were codified by two independent researchers to identify three different styles of parenthood representations: well-balanced MR, withdrawn MR and ambivalent MR. The styles of ART couples were compared with "natural" pregnancy couples. We applied Wilcoxon Test to find MR partners differences. We found a prevalence of withdrawn styles of MR in mothers (53%) while men (52%) reported more balanced style of MR. Women were incline to speak about their pregnancy with poor emotional words and they showed difficulties in recognize their psychological and physical changes. Men were more incline to describe their experience as an important chance to change their life and they appeared ready to welcome the baby. As reported in literature we found gender differences in psychological reactions to pregnancy obtained after ART and this result can be ascribe to different impact of infertility on women. Women's partners can be witnesses of infertility experience while this is not possible for women who play an important physical and emotional role during treatments.

It's probably this kind of involvement that paralyzed women's emotions while men have to maintain a supportive role, during treatments, and this role can enable them to hold a cognitive position.

Keywords: *mental representation, artificial reproductive techniques, infertility, emotional distress, parenthood*

Mentoring styles, mentor's self-assessment and mentee's success in a peer mentoring program

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Mentoring programs in the higher education context widely show positive outcomes for mentees as well as mentors. Most research is based on mentor support in general and does not include different types of mentoring styles. Mostly either the mentor's perspective or the mentee's perspective is taken into account. In this study, different mentoring styles using indicators of (online) mentoring behavior of peer mentors are presented. The aim is to examine if there is an effect of the received mentoring style on the mentee's success of participation in the mentoring program. Further, to combine the perspectives of mentees and mentors, the relationship between the mentoring style and the mentor's self-assessment of given mentoring is researched. Data were collected as part of an evaluation of a formal peer mentoring program in winter term 2007/08. Forty-eight peer mentors (senior students) lead mentoring groups of randomly assigned seven to eight mentees (first-year students). 298 mentees and 27 student mentors completed an online questionnaire concerning perceived mentoring and the self-assessment of given mentoring respectively. Using the assessment of perceived mentoring by mentees, online mentoring behavior and qualitative analysis of the mentors' online messages eight indicators of (online) mentoring behavior are specified. Using cluster analysis three distinct mentoring styles are identified: "Motivating master" ($N=14$), "Informatory standard" ($N=30$), and "Negative minimalist" ($N=4$). The motivating master group

had a positive effect on the mentees' success in participation (more mentees than expected successfully completed the mentoring program) whereas the informatory standard and the negative minimalist groups did not show a significant effect. Self-assessment of given mentoring did not differentiate between the motivating master and the informatory standard group. Mentors in the motivating master group estimated their given mentoring alike to the assessment by their mentees, whereas mentors in the informatory standard group estimated their given mentoring higher than their mentees. Results indicate that mentors who are highly motivated in acting as mentors (motivating master) have a positive effect on the mentee's success. Mentors who concentrate on giving information (informatory standard) fulfill their role as mentors too, but their given mentoring seems to be misconceived by their mentees.

Keywords: *mentoring programs, higher education, mentoring behavior, mentoring behavior, peer mentoring*

Mindfulness, stress and cognitive performance in a military setting

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The aim of the current study was to test the applicability of the capacity to be mindful in a military simulated situation and its impact on the stress level and a cognitive performance. As mindfulness is considered as a predictor of adaptability to stressful events, it appeared pertinent to measure this same concept within a military context, given the short "termism" of operations as well as the long "termism" of global health in the interested participants. In the first stage, the relevance of using the Freiburg Mindfulness Inventory-short form (FMI-short form) in a military sample was tested. Results were nearly comparable to results on a civil sample: items grouped into a one-dimension solution, internal consistency of the scale based on this solution was ranged from .73 to .74, and the six month test-retest reliability was good. Positive correlates indicated that individuals scoring high on mindfulness are

conscientious, with positive emotions, with a seeking outlook of the world and with task-oriented coping abilities when faced with adversity. The lowest scores in mindfulness, observed for subjects reporting a stressful event in the past years, were associated with higher emotional disturbances. In a second stage, the intent was to test the applicability of the capacity to be mindful in a simulated situation. For that purpose, sympathovagal balance, salivary cortisol level, mood and sleep perception were assessed by questionnaires, and short-term and declarative memory were evaluated in thirteen submariners during a submarine simulation escape according to the level of mindfulness. Assessments were realized in three periods: before the escape (Baseline), immediately after the escape (Escape) and two hours after it (Recovery). In the results, submariners high in mindfulness score exhibited both lower stress reaction, higher vagal recovery ($p < 0.05$), lower cortisol responses across the exercise time ($p < 0.05$). They also exhibited a lower cognitive degradation in declarative memory ($p < 0.05$). Results showed the importance of considering the mindfulness dimension for that population, both in terms of initial selection and training of further capacity. Furthermore, results trigger a reflection and drive an interest to develop this competence given the level of benefits which impact several domains of the participants outside of the mere operational venue. It sets the ground for the introspection of a balanced leverage for social cohesiveness both in teamwork as well as in the own individual spheres.

Keywords: *mindfulness, stress, cognitive performance, military*

Mirror imagery, conflict styles, and willingness to seek forgiveness in post-crisis phase of intergroup conflict (a case study of Dayak-Madura communal violence in West Kalimantan, 1997)

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The aims of the present study was to describe level of mirror images generated by each group toward the other group in post-crisis phase of

intergroup conflict; to understand the correlation of mirror imagery, conflict styles, and willingness to seek forgiveness in post-crisis phase of intergroup conflict; to explore interactions of psychological variables in intergroup conflicts which can be generalized to other intergroup conflicts; to predict the probability of recurring communal violence in intergroup conflicts; to recommend social psychological intervention to promote reconciliation processes during post-crisis phase of intergroup conflicts and to stimulate further cross-culturally sensitive research in peace psychology. Participants which consist of 50 members of Dayak group, and 50 members of Madura group affected by 2007 communal violence in West Kalimantan were selected by accidental sampling method. This research used ex post facto field studies research design. Three scales were administered to both groups, which are Semantic Differential Mirror Imagery Scales, Rahim Organizational Conflict Inventory-II, and Willingness to Seek Forgiveness Scale. All measures were translated into Indonesian by the author. Research is currently undergoing with no conclusive remarks yet. Results are anticipated to be available by the end of January 2010.

Keywords: *intergroup conflict, post-crisis phase, mirror images, forgiveness*

Mobile phone assessment of cognition: Development of a validation model

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Tests of memory, attention and processing speed are widely used to assess cognitive changes due to illness, physiological state or treatment. Portable devices such as mobile phones are useful platforms in many situations as they allow assessment of such outcomes in an everyday context. Frequent assessments may be made, and correlations between cognition and factors such as sleep, eating, and fatigue examined. The limitations of these devices, in terms of processing power and user interfaces, make it important to assess the validity of such assessments. A three level approach to validation is proposed: (1) Device-level, evaluating the accuracy of internal timing and correct software implementation; (2) Intrinsic,

evaluating the ability of a test to discriminate between stimulus types of differing difficulty within a test; (3) Extrinsic, evaluating the ability of a test to discriminate between states affecting cognition within or between individuals. A mobile phone test battery has been developed using Java (Tiplady et al., 2009, *Alcoholism: Clinical and Experimental Research* 33: 2094-2102). Device-level validation confirmed correct operation in terms of presentation algorithms and error scoring. Internally-recorded timing was compared to externally measured response times, and showed high agreement ($r > 0.995$). Intrinsic validation used a memory scanning task in which responses to stimuli not in the memory set were expected to be longer than those in the set. This was confirmed in several studies, with differences of about 100 msec observed between the two conditions. Extrinsic validation has used the effects of alcohol. The impairments with alcohol assessed with mobile phone testing were similar to previous work with systems using conventional computers. Results were also similar when mobile phone systems were used in laboratory and everyday (unsupervised) settings. Taken together, these results support the validity of the use of mobile phones for assessment of cognition. Despite the limitations of the mobile phone as an assessment platform, a wide range of assessments can be set up evaluating relevant domains of cognition. These tests can be effectively used in an unsupervised environment, allowing the extension of ecological momentary assessment into the area of cognition.

Keywords: *cognitive assessment, mobile phones*

Mobilizing support for and resistance to intergroup conflict resolution: The case of the 'Annan Plan' in Cyprus

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In 2004, the 'Annan Plan', a UN proposal for a solution to the inter-group conflict in Cyprus, was placed before the Greek and Turkish Cypriot communities in a re-unification referendum. The proposal was accepted by the majority of the Turkish-Cypriots but was rejected by the

majority of the Greek-Cypriot community. This paper examines how the main arguments of the 'Yes' and 'No' campaigns framed the public debate as reflected in the Greek Cypriot print media. It draws on theories of social movements, conflict resolution and identity to analyse the arguments of the campaigns 'For' and 'Against' the Annan Plan. A media analysis of newspapers' coverage of the events leading to the referendum of the 'Annan Plan' in Cyprus was carried out. Using Thematic Content Analysis (Braun and Clarke, 2006), we analysed a sample of newspapers over the span of 45 days, covering the period before and after the national referendum. Our analyses illustrated the central role of in-group and out-group definitions in framing the Annan plan played in the both the 'Yes' and 'No' campaigns. However, they showed that the two campaigns employed different processes and frames in providing meanings of the content of the Annan plan. Within the 'YES' campaign, there was an 'admitting share of blame' in relation to the conflict; Greek-Cypriots needed to recognize and accept a share of blame and not just blame the 'Others'. Within the NO campaign, the plan was framed as a case of victimization, injustice, and a human rights violation; thus not challenging the dominant social memories of the Cyprus conflict. Different identity constructions of the in-group and out-group were used in mobilizing people to either accept or reject the plan. Also particular constructions of past events were employed to support particular constructions of the Greek Cypriot identity.

Keywords: *Annan Plan, intergroup conflict, conflict resolution, identity, resistance*

Moderating effects of team constructive climate and mediating effect of team conflict on the relationship between shared mental models and team performance

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Adopting a cognitive approach, researchers have demonstrated that shared mental models (SMMs), defined as structured understanding or mental representation of team tasks and

interaction shared by team members, offer a common cognitive basic for team members to communicate and coordinate fluently and thereby enhance team effectiveness. However, high level of mental model similarity may not always have a positive effect on team performance. The current study aims to investigate the contingent relationship between SMMs and team performance, which remains an under-research topic in the literature. We speculated that team constructive climate would moderate, and team conflict would mediate, the effect of SMMs on team performance. 972 participants representing 154 teams (average team size is 6.3, $SD = 4.1$) from a large telecommunication corporation in China gave responses to the survey questionnaire. The responsibilities of these teams are in charge of the operation, monitoring, maintenance, emergent corresponding and other management of the core telecommunication network facilities. Individual mental models were elicited by asking members to rate the priority of 13 potential strategies when the team was required to resolve each of two critical incidents which were related to the malfunction of telecommunication network facilities. SMMs were indexed by calculating the average correlation between all members' responses within each team. For the measures of team constructive climate and team conflict, ratings of individual team members were aggregated to create team-level data. Team performance was rated by team managers. Results of series of hierarchical regression analyses indicated that: a) the effect of SMMs on team performance was positive and marginally significant ($\beta = .16, p < .10$); b) the interaction between SMMs and team constructive climate was significant ($\beta = -.19, p < .05$), suggesting that the effect of SMMs on team performance was moderated by team constructive climate. Further analysis showed that when team constructive climate was weak, SMMs were positively related to team performance. While when team constructive climate was strong, the effect of SMMs on team performance was not significant; c) team conflict mediated the effect of SMMs on team performance; d) the mediating effect of team conflict was moderate by team constructive climate. Specifically, SMMs could enhance team performance by reducing team conflict only under the condition when team constructive

climate was weak. Consistent with prior research, our findings suggested that SMMs were in general positively related to team performance. Furthermore, we also found that the positive effect was contingent on team constructive climate in that high level of mental model similarity added no value to team functioning when there was a strong constructive climate.

Keywords: *shared mental models, team performance, team constructive climate, team conflict*

Moderator effects of cognitive control deficits on the relationships between emotional dissonance and burnout as well as absenteeism

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Emotional dissonance refers to the perceived discrepancy between genuinely felt emotions and emotions required by the job role. A large body of evidence indicates that emotional dissonance exerts adverse effects on job strain, especially burnout. Results from experimental research suggest that cognitive control deficits as a vulnerability factor explain why emotional dissonance is more strongly related to burnout for some employees than for others. Cognitive control deficits involve difficulties of attention and memory, affective instability, and limited flexibility in dealing with novel and changing tasks. In the present study, we tested whether moderate cognitive control deficits strengthen the positive relationships between emotional dissonance and burnout and absence behaviour. The present field study draws on a sample of 327 employees of a German civil service organization. For all employees participating, absence data of the 12 months following the survey was available (*sum of days absent* and *absence frequency*). The measurement of emotional dissonance based on five items which stem from the Frankfurt Emotion Work Scales (Zapf et al., 1999). Cognitive control deficits were assessed using the Cognitive Failures Questionnaire (Broadbent et al., 1982). Emotional exhaustion and depersonalization

were introduced as burnout variables measured by the Maslach Burnout Inventory (Maslach & Jackson, 1986). In order to test the interactions, a non-linear structural equation model was analyzed. Parameter estimations revealed significant interactive effects of emotional dissonance and cognitive control deficits on all outcomes considered such that the positive relationships between emotional dissonance and burnout as well as absence behaviour were amplified as a function of cognitive control deficits. The results show that cognitive control deficits function as an individual vulnerability factor in performing emotion labour especially when emotions have to be displayed which may not be genuinely felt. Besides burnout, the interactions were also reflected by measures of absence behaviour that is strongly related to organizational costs.

Keywords: *cognitive deficits, emotional dissonance, burnout, absenteeism*

Mothers for “technique” and mothers for “nature”: Early mother-infant interaction, maternal mood and transition to parenthood

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Evidence about effects of assisted reproduction technique on parenthood and mother-infant interaction is poor and discrepant. The aim of this research is to increase understanding of the maternal mood status and the early mother-infant interaction according to two groups: one conceived by ART and one by natural conceived. In our study we observed 60 first-time mothers from pregnancy (3rd trimester) to 3 months after childbirth. The sample was selected from a larger sample of Italian population attending prenatal courses in Florence Hospital. Subjects included primiparous mothers (28 ART end, 32 naturally) with a stable partner relationship, with no reported previous psychiatric disorders, their pregnancy was without risks factors and their babies (32 ART and 32 natural) were born at the expiry date in good health. During pregnancy we assessed mothers' mood state (Edinburgh Postnatal Depression Scale EPDS; Cox et al., 1987) and life-time psychiatric disorders. After childbirth we investigated again mood

state and videotaped a 5-minutes mother-infant interaction according to the Global Ratings of Mother-Infant Interaction (GRS, Murray et al., 1996) which values maternal Sensitivity, Intrusiveness and Depression; infant Communication and Behaviour and Global Interaction. During the early interaction ART mothers are more intrusive with their infants. However they don't show severe clinical behaviour aspects. Mothers undergoing ART display more intrusive behaviour patterns during interactions with their babies. They also show less depressive signs in the GRS evaluation. ART mothers display more depression signs in EPDS mean scores in contrast with naturally mothers after childbirth but not during pregnancy. High depression levels are shown only by ART mothers and no natural mother has severe depression symptoms. Analyses revealed that maternal mood is stable in each group. In fact mothers maintain the same level of depression showed during pregnancy and after childbirth. No natural mother had a high depression level, while some ART mothers show severe depressive symptoms. ART mothers with mild depression symptoms are more intrusive in the GRS. Babies of mild depressed ART mothers display a significant better communication during the interactions. A negative effect of assisted conception on the mothers intrusiveness during the interaction (GRS) and on mood state are identified.

Keywords: *assisted reproduction technique, parenthood, mother-infant interaction, mood, depression*

Motivating prosocial behaviour among blood donors: The influence of affective commitment, role identity, and perceived obligation to donate

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The aim of the present study is to assess the influence of three motives for pro-social behaviour among experienced blood donors. Previous studies of donors have identified role identity as a blood donor and moral obligation to donate as motives for donation (e.g., Piliavin & Callero, 1991; Godin et al., 2007), but few

studies have considered donors' relationship with the collection agency. In addition to role identity and obligation, we test a model that incorporates affective commitment to the collection agency as a driver of return behaviour and advocacy. A total of 231 apheresis donors participated in this study, who had donated with the Australian Red Cross Blood Service (ARCBS) within the previous 10 days. They completed an electronic survey, which contained measures of affective commitment to the ARCBS, blood donor role identity salience, perceived moral obligation to donate, and advocacy behaviour. Using a longitudinal design with historical and (5-month) post-survey donation data, we propose a model in which the three motives partially mediate the relationship between past and post-survey donation frequency. The model revealed that higher numbers of pre-survey donations were associated with greater affective commitment, role identity salience, and moral obligation to donate. Affective commitment was found to be the strongest predictor of post-survey donations, which partially mediated the relationship between pre- and post-survey donations. Role identity salience was associated with reported advocacy behaviour, but not actual donations. Contrary to expectations, moral obligation predicted neither post-survey donations nor advocacy behaviour. The overall structural model was found to be a good fit to the data ($\chi^2(92) = 136.999$, CFI = .976, RMSEA = .046, SRMR = .041). With limited marketing resources, collection agencies depend on established donors to sustain their supply of blood products and promote donating to other people through positive word-of-mouth. The results of this study imply that return behaviour is most strongly motivated by affective commitment to the collection agency, whereas advocacy is primarily motivated by role identity salience. Drawing on the organisational behaviour and relationship marketing literature, strategies for enhancing affective commitment and role identity salience are presented.

Keywords: *motives, pro-social behaviour, affective commitment, role identity, moral obligation*

Motivational traits and job performance: Mediating role of self-efficacy

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This study investigated the relationships between approach and avoidance motivational traits and job performance, while considering the mediating role of self-efficacy. Approach motivation was divided into two traits: personal mastery (i.e., desire to achieve) and competitive excellence (i.e., desire to perform better than others). Avoidance motivation, which reflects one's sensitivity to negative stimuli and the desire to escape such stimuli, was conceptualized as motivation anxiety. Using structural equation modeling (SEM), the relationships were examined in a sample of 562 full-time employees. For the approach motivation traits, results showed that personal mastery and competitive excellence were positively related to job performance. For avoidance motivation, results showed that motivation anxiety was negatively related to job performance. Self-efficacy mediates these relationships very well. Our study shows that motivational traits were predictors of job performance and considers the mediating role of self-efficacy. We encourage future research on the links of these approach and avoidance motivational traits with other organizational outcomes.

Keywords: *job performance, motivational traits, self-efficacy, Avoidance motivation, Approach motivation*

Need fulfillment in the workplace and its effects on psychological well-being, job satisfaction and job engagement

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The conceptual framework for this research was Self Determination Theory (SDT). The aim of the present study was to investigate the effects of total and balanced need fulfillment within the workplace. Need fulfillment consists of: autonomy, relatedness, and competency. It was hypothesized that as levels of need fulfillment (both total or balanced) increased, there would be proportionate increases in psychological wellbeing, job satisfaction, and job engagement.

140 participants met the inclusion criteria, consisting of 61 females and 79 males. Ages ranged from 18 to 65 ($M=30.02$ and $SD=12.67$) and all worked within Australia. Participants completed a questionnaire which assessed: Need Fulfillment; Psychological Wellbeing (environmental mastery, personal growth, purpose in life, and self-acceptance); Job Satisfaction (satisfaction with the work itself, co-workers, supervision, the work group/unit, and with the company) and Job Engagement. A seven point Likert rating scale was provided for each scale item. One-way ANOVAs with a priori polynomial contrasts found that greater total need fulfillment significantly increased psychological wellbeing, job satisfaction, and job engagement. Comparatively, greater balanced need fulfillment did not. The present study reveals the importance of total need fulfillment within the workplace, as it pertains to optimal individual functioning (i.e., psychological wellbeing) and greater organisational outcomes (i.e., job satisfaction and job engagement). It confirms that employees who have more positive experiences in relation to their three psychological needs at work, will experience greater feelings of psychological wellness, satisfaction and engagement (as emphasized by SDT). The relevance of balanced need fulfillment on such work-related outcomes needs further investigation as its effects did not contribute to any of the above mentioned outcomes. All in all, studying need fulfillment within the workplace may help us to develop a clearer conceptualization of the ways in which needs are fulfilled and of how these needs contribute to optimal human functioning and greater work outcomes.

Keywords: *self determination theory, need fulfillment, psychological well-being, job satisfaction, job engagement*

Neural network-based systems for the predictive classification of academic performance: Assessments without testing

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This paper presents two highly successful examples of predictive systems approaches in the field of educational assessment. Because of the complexity of the variables involved in the field of education and educational assessment in particular, it is possible to use this approach to improve the quality of educational assessments. In particular, neural networks, with their superior potential for pattern recognition and classification are particularly well suited to use available data to give a broader expectation of academic performance, based on a wider set of predictors which lead to an increase validity of the constructs and the obtained results, while at the same time increasing the accuracy of the resulting classifications. Predictive systems approaches allow for the understanding of the students' individual characteristics in addition to the prediction of expected performance levels. Several neural networks models were developed, to obtain predictive classifications in various performance tasks. Study 1, involving 1052 first-grade students, developed a predictive classification of students into three groups corresponding to three levels of readiness for reading instruction. The procedure used was a back propagation network, that is, a multilayer network composed of nonlinear units. Predictor variables included family, health, and general background. Study 2, involving 267 first-year university students, used a similar methodology to model predictive classifications of mathematics and general education performance. Predictor variables included motivational, general background, learning strategies and cognitive measures. All models were very successful. Study 1 results had a total accuracy of 94-98% for the classification of students into three levels of performance. Study 2 achieved total accuracy of 96-98% for the prediction of various levels of mathematics performance, and 94-99% accuracy for models of general academic performance at the end of year 1 in higher education studies. In summary, this predictive system methodology is proposed as a valuable alternative to develop more comprehensive and accurate assessment systems which can increase the validity and the accuracy of diagnostic, placement, and selection decisions in educational settings, thus achieving higher levels of fairness and efficiency, while also increasing the understanding of the

processes involved, with an opportunity for “continuous assessment”.

Keywords: *educational assessment, neural networks, academic performance, Predictive systems, validity*

Non-technical skills, obstetrician expertise and the quality of clinical reasoning

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There is widespread concern in the medical literature regarding patient safety and the potential impact of errors in clinical decision making (Healey, Catchpole & Yule, 2008; WHO, 2009; Dunphy et al., 2009; Yule et al., 2008). Recent evidence suggests that physician affect and metacognitive processes have a direct impact on the quality of clinical reasoning and ultimately the standard of patient care (Dunphy et al., 2009). The aim of our study was to explore the clinical reasoning processes of twelve consultant obstetricians through semi-structured interviews. We hypothesized that the interaction of obstetrician metacognition and affect is fundamental to the quality of their clinical reasoning. Researchers in the United Kingdom (Flin et al, 2007) have developed a taxonomy of surgeons’ non-technical skills (NOTSS) which has four categories: situation awareness, decision-making, communication and teamwork, and leadership. We analysed these interviews using the Non-technical skills (NOTSS) taxonomy (Flin et al, 2007), paying particular attention to the impact of metacognitive processes and affect on the application of non-technical skills. In performing our qualitative analysis we looked for evidence of an interaction between obstetrician affect and breadth of application of non-technical skills. We hypothesized that obstetricians who utilized a broad range of non-technical skills were more likely to be big picture thinkers, to be experts in their field and be associated with positive affect and superior patient outcomes. Conversely, obstetricians found to employ a narrower range of non-technical skills may have “tunnel vision” and their clinical reasoning may

be compromised by negative affect. We have data on patient outcomes for the same group of obstetricians obtained from a high quality standardized perinatal database, and a matrix of data from standardized psychology questionnaires. When our qualitative analysis is complete we will triangulate our findings with psychology scales demonstrated to be predictive of patient outcomes in the same population of obstetricians and clinical information from the perinatal data base.

Keywords: *decision making, patient safety, physician affect, meta-cognition*

Not yet, not here, and not us: Investigating the drivers of doubt and inaction in response to climate change

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For more than 30 years, extensive empirical evidence has been mounting about anthropogenic climate change. Despite the degree of scientific consensus, and the lack of credible alternative explanations, individuals, communities and governments have been slow to act. The degree of action taken in response to climate change has, so far, been inadequate to the scale of the threat. Further, there are extensive public expressions of doubt about the “reality” of climate change, and public opinion surveys have consistently shown that a large proportion of the community in many countries does not accept that a threat exists. How can this inaction and doubt be explained? In this paper, we critically review a number of potential explanations for climate change doubt and inaction, including both passive inaction and active resistance to climate change and/or the changes that have been suggested to address it. Relevant explanatory mechanisms include various psychological responses to threat, cognitive biases in decision-making, and an array of individual and societal responses to external pressure to change. We evaluate the existing empirical evidence in support of these mechanisms, focusing especially on the context of climate change and pro-environmental behavior. In turn, we attempt to identify the types of interventions that are most likely to be

able to overcome the relevant mechanisms. Results of our review provide support for a number of explanatory mechanisms. Although no single theoretical approach seems capable of fully explaining the current societal responses, biases in decision-making seem especially relevant. Evidence indicates that the lack of response may reflect a lack of perceived relevance and immediacy of climate change impacts, but rather a perception that the impacts will be felt by other people, in other places, in some unspecified future. The societal tendency to ever-increasing consumption is also recognized as an important underlying mechanism. On the basis of our review, we develop an integrated multi-level model of the drivers of doubt and inaction in response to climate change, and identify some important features of interventions that may be used to overcome these effects. We also develop an agenda for future empirical research in the area.

Keywords: *climate change, threat, cognitive bias, decision making*

Older adults' perceptions of the benefits of music making: community, coping and connectedness

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The ageing of Australia's population is creating challenges for maintaining health and combating social isolation. Music has the potential to enhance quality of life in relation to health, activity, happiness, independence and the development of community. This research in progress investigates engagement with music by older Australians. We identify the perceived benefits which motivate individuals to begin and continue their involvement in individual and community music making. Participants were recruited through seniors' newspapers, advertisements, and public online sites. They completed a purpose-designed questionnaire with fixed choice and open ended questions to investigate and quantify their engagement with music. Our research identifies a broad spectrum of ways in which older people engage with music individually and in the community and what benefits they perceive. Survey data regarding

sense of community, environmental connectedness, feelings of wellbeing, meaning, spirituality, coping with losses, physical health, perceived mental health, and life transitions were analysed. Open-ended questions were analysed using the qualitative methodology of Interpretative Phenomenological Analysis. In this research in progress, we add to the scant research systematically investigating the benefits of music for older adults living in the community. To date this has not been undertaken anywhere in Australia. A single case study with a group of older amateur musicians in Victoria, Australia, recently identified that engagement with community music provided a sense of purpose and fulfillment, helped establish and maintain relationships and offered opportunities for personal growth. The current research maps engagement with music and motivations for continuing engagement. Implications for the development of further resources for healthy ageing are discussed.

Keywords: *social isolation, ageing, music, quality of life*

Operationalising results based management in an African public service: some hard and soft competences

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This study examines the antecedents of productive attitudes and behaviours, organisational citizenship behaviour (OCB), associated with the Results Based Management (RBM) initiative in an African context. Specifically we explored the relationship between organisational social capital (OSC), RBM work-based competences and OCB in a Public Service Ministry implementing RBM. We conducted two cross sectional surveys. In the first we interviewed ten key informants to articulate the competences required of a RBM facilitator. In the second we administered a structured questionnaire measuring RBM competences, organisational social Capital and Supervisor rated Organisational Citizenship Behaviour. Of these one hundred and eleven had been in the service for more than six years.

The majority of the respondents ($N = 114$) were male, where 49 were above 41 years (mean age = 32 years). Using zero order correlation, we found high positive correlation (.41) between RBM competences and supervisory rated OCB providing support for the hypothesis stating a positive relationship between RBM competences and OCB. We also found a high and positive correlation (.61) between OCB and organisational social capital demonstrating support for the hypothesised relationship between OCB and OSC. These relationships were confirmed through a regression model using OCB as the dependent variable. Using the enter method, we found an Adjusted R Square of .45 indicating that the variables were able to account for 45% of supervisor rated OCBs among the sample of senior officers who took part in the study. On further examination we found that Organisational Social Capital could account for 56% of the variance in the OCBs while RBM competences independently accounted for 24%. Both antecedents were significant at .001 or better. The results from the study point to a number of issues that should be taken care of when implementing RBM in Africa. The first is organisational social capital. The second is organisational citizenship behaviour. The third is comprised of the actual behavioural or operant competences required to perform RBM related activities. We refer to the first two as the soft competences that must be attendant at all times during the RBM cycles but most especially during the throughput or activities/output phase. We refer to the third as the hard competence because it directly rather than indirectly impacts on the required outputs.

Keywords: organisational citizenship behaviour, results based management, productive attitudes, African public service

Optimism and readiness to citizenship activity in the future among young people from developmental perspective

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The aim of the study is to examine the character of young people optimism and its relation

towards citizenship activity. According to Czapiński (2005) and Stach (2006) we differentiate: (1) essential (passive) and (2) expansive (active) optimism. We assume that young peoples' perception of the local future is related to the expansive optimism and global future to essential optimism. Then we expect that the higher optimism towards the local future, the higher readiness for social (participation in campaigns) and political (interested in politics, voting in election, belonging to political party, be elected) action. Research questions are (1) is there difference between young peoples' optimism towards local and global future and does it depend on age, and (2) is readiness to political and social action related to optimism towards local and global future. 2473 young people in three age groups 11 (884), 14 (903), 18 (686) from 4 European countries (Poland, UK, Spain and Turkey) were examined by the questionnaire What do you think about future (by Holden). Questions about optimism towards five social issues (violence, poverty, unemployment, environment, tolerance) in local and global perspective were reported on five-point scale. Five questions about action were reported on a four-point scale. Results show that young people are more optimistic towards local than global future ($t=7,88$; $p<0,001$). Although optimism towards both local ($F(2/2472)=38,172$; $p<0,001$) and global ($F(2/2460)=77,10$; $p<0,001$) future depend on age - youngest children (10 years old) are most optimistic, the difference between them is stable. There was also a non-significant correlation between local and global optimism and declaration to political and social action. Young people from different countries perceive local future as more optimistic than global (which can go together with effect of unrealistic optimism of Weinstein, 1980). Although optimism towards social issues from local perspective could have a more active character, having the possibility of change, it is not related to declaration for social and political action. It seems that different ways of examining optimism and social and political action is needed to confirm the relationship between optimism and readiness to act (e.g. focus on optimism to positive social issue rather than negative).

Keywords: *young people, optimism, citizenship activity, future*

Organizational climate and company performance: A multilevel test

VERBURG, R. (Delft University of Technology)

We aim to contribute to the Human Resource Management (HRM) literature by performing a multilevel test of the often theorized relationship between Organizational Climate (OC) and performance. Second, we aim to contribute to the theoretical knowledge of how actual and perceived Organizational Climate relate by testing the moderating role of leadership level. In a multi-source, multilevel study of 41,693 employees and managers in 47 branches of a large firm, we tested how Organizational Climate relates to organizational level outcomes, such as productivity, turnover and profit. We found direct relationships between Organizational Climate and both turnover and unit performance. Hierarchical linear modeling analyses showed that perceived Organizational Climate mediated the relationship between actual Organizational Climate and leadership level moderated the relationship between Organizational Climate and performance. These findings contribute to our understanding of how Organizational Climate affects company outcomes. The study has several strengths, including the relatively large sample and the multi-level nature of the study. An additional strength of our study is the use of different rater sources. Nevertheless, there are also limitations. For example, the choice to conduct this study in one large firm has both advantages and drawbacks. An advantage is that intended Organizational Climate as set out by head quarters was kept constant, thus we can be more confident than in a multi-organization study that variations are due to implementation by managers in the business units and perceptions. However, the generalizability to other firms or sectors may suffer from this limitation to a single firm that has its own specific policies and additional research in other contexts is needed.

Keywords: *organisational climate, leadership, performance*

Organizational support and its implications for Japanese professional athletes in career transition

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The aims of this research are to explore the organizational career support offered to Japanese professional athletes transitioning to post retirement career, and to discuss its implications in regards to athletes' transition in the volatile Japanese labor market. The services offered by the employment bureaus (Career Support Center) of the Japanese professional football league (J league) were reviewed, and qualitative semi-structured interviews were also conducted with eighteen ex-professional soccer players who were randomly selected for this research. The data were analyzed in order to examine the correlation between the services provided by the organization and the needs of athletes. This research clearly shows that the types offered by the employment bureau in J league, such as job training programs and exchanging the information, is found to be useful for transitioning athletes in the volatile Japanese society. However, there is a discrepancy between the employment bureaus' capability and the ex-athletes' essential needs during the 'internal' career transition (Schein, 1990). In addition, this research discovers that courageousness and approachability of the people in their social network are the important factors for the players' internal career transition. Approachability consists of four components; career related information, acceptance, availability, and confidentiality. Our conclusions are the following: (1) the roles of formal career support are partly important for the athletes' transition in Japan, (2) professional athletes who are seeking new career choices should have courageousness when networking during job-hunting and after retirement, and (3) people supporting job-seekers should improve their approachability skills.

Keywords: *career support, Japanese, career transition, social network, approachability*

Parallel play in acute mental health settings: Nurses and psychologists working within the time and space of acute wards

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This paper explores the different ways psychiatric nurses and clinical psychologists interact with patients and colleagues, in the time and space of acute psychiatric wards. Ethnographic fieldwork over 18 months in a 44 bed acute unit was used to identify the shaping influence of time, hospital routines and various spaces on the practice of twelve psychiatric nurses. The temporality and located-ness of nurses was considered in contrast with that of clinical colleagues. Theoretical analysis was informed by the work of the post-structural social theorist, Foucault. Analysis highlighted how shift-working nurses' relationships to ward time and space differed significantly from that of psychologists. Shift-working nurses were tied to the communal spaces of the ward and the ward office for the entire shift, where they moved through the ward space with a characteristic momentum and were subject to constant interruption. Psychologists spent time in staff-only meeting spaces or offices and entered the patient areas of the ward for planned events, such as groups or individual consultations. These differences were taken-for-granted among clinical team, and there was little intersection between work-worlds, despite staff working in close proximity. Their engagement with ward time and space produced parallel understanding of patients, their needs, and priorities for care and therapy. Neither nursing nor psychology perspectives were robustly discussed or embraced in multidisciplinary gatherings, such as ward rounds. Making such differences more visible can serve to strengthen complementary roles, teamwork and collegial support in hospital settings. It also highlights opportunities for re-configuring roles, spaces and routines, to enhance collegial understanding and teamwork.

Keywords: acute mental health settings, professional staff, staff-patient relationships

Parental control and obsessive-compulsive symptoms: The role of metacognitions & self-identity

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Although the effect of parenting styles and the development of anxiety disorders has been proposed, its effect has yet to be studied in Obsessive-Compulsive Disorder (OCD). As yet, we know very little about how they might exert its influence on the development of OCD. Theories like the Metacognition (Wells, 2004) and the Discrepant self-identity theories (Purdon & Clark, 1999) have suggested some possible etiological mechanisms in OCD, yet they have not been thoroughly investigated as with the established cognitive theories of OCD. Therefore, this study aimed to examine the connections between parenting styles and OCD. In particular, we investigated whether OCD-like metacognitions and/or discrepant self-identities (i.e. the difference between one's current self-attribution and desired self-attribution) would mediate the influence of negative parenting styles on OCD symptoms. A sample of 462 healthy adult community participants in Singapore was surveyed. Each participant filled out an anonymous questionnaire on: negative parental discipline styles, discrepancy between current and desired self-identity, metacognitive styles (e.g. thought fusion), and OCD symptom level and subtypes. Trait worry level was also taken, in order to control for its influence on OCD symptoms. Results of Bootstrap analyses showed that negative parenting style was significantly correlated with discrepant self-identity, worry, OCD meta-cognitions, and OCD symptoms. Bootstrap mediational analysis further illustrated that the association between discrepant self-identifies and OCD symptoms was fully mediated by worry. Furthermore, when worry was controlled for, the association between negative parental discipline styles and OCD symptoms was partially mediated by OCD metacognitive beliefs. The observed involvement of negative parenting style indicates a familial influence on OCD symptoms that warrants further exploration. In addition, the results lend support to the Metacognition Theory (Wells, 1997), which argues that the manner in which people process their thoughts

contributes to their OCD symptoms. Consonant with current literature, discrepant self-identity appears to influence OCD, albeit in a non-specific way. This finding is largely commensurate with Purdon and Clark's theory (1999). This study has great implications on the understanding of OCD. It also contributed to the limited literature on parenting and mental disorders in the context of Singapore

Keywords: *parenting styles, obsessive compulsive disorder, meta-cognition, discrepant self-identities*

Parents' work and family strains: A new mental health risk for children?

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Combining work with caring for children can be stressful as well as rewarding. Our aim was to investigate if parents' work-family strains (or gains) are important for children's mental health and wellbeing. We use cross-sectional survey data from the Growing Up in Australia study of parents with 4-5 year old children ($N = 2133$ employed mothers; 2661 employed fathers). Child wellbeing was assessed using the Strengths and Difficulties Questionnaire (SDQ), a measure of children's emotional and behavioural problems. Multiple regression modeling tested for associations between child SDQ scores and mothers' and fathers' reported work and family strains, and work and family gains. Parent's work-family strains, gains and their own psychological distress were interrelated, suggesting that they affect each other. Parents' strains, gains and distress were also associated with children's difficulties, and these effects were observed after adjusting for their interrelationships. Elevated levels of work-family strain showed additional, independent associations with poorer child wellbeing. Further, parents' experience of gains and rewards from combining work with family appear to be protective for children's wellbeing. Children in socio-economically disadvantaged families benefitted the most from parents' work-family gains, relative to children from more advantaged households. Our findings suggest that parents' jobs can exert additional, independent effects on children's mental health,

after adjusting for parent mental health. This study indicate that reducing mothers' and fathers' work-family strains and increasing their gains and rewards from jobs may be another, essential foci for interventions to improve children's mental health and life chances, especially in socio-economically disadvantaged families.

Keywords: *parents, work, family, mental health, children*

Participants of online surveys on health care in dermatology have something in common: The critical view

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The aim of the current study was to compare data gathered online on health care between dermatological diseases and with data gathered paper-and-pencil based. In four different web surveys a total of 4428 patients (1946 with psoriasis, 542 with acne, 1348 with rosacea and 592 with atopic dermatitis) completed an online version of a questionnaire on clinical data, therapy and patient benefit. Subsequently, difference analyses were conducted between these diseases, which were partially investigated online for the first time. Additional difference analyses to paper-and-pencil based data of 5251 patients with psoriasis, atopic dermatitis and rosacea were carried out. Across all patients who participated online, more women took part. Most experienced with systemic therapeutics were patients with acne (64.6%), followed by atopic dermatitis (47.0%), rosacea (38.7%) and psoriasis (29.1%). Of the online participants, there were only minor differences regarding satisfaction with treatment (1 = very satisfied to 4 = very dissatisfied) between atopic dermatitis and rosacea (each 2.8 ± 0.9), psoriasis (2.9 ± 0.9) and acne (3.1 ± 0.9). Small differences between the diseases were also found regarding patient defined treatment benefit and perceived treatment success. The lowest patient benefit (range 0-4) was found in acne patients (1.1 ± 1.0), followed by atopic dermatitis (1.2 ± 1.0), rosacea (1.3 ± 1.1) and psoriasis (1.4 ± 1.2). The

patient benefit across the diseases was only marginally above the cut-off-value of 1 (minimum relevant benefit). Both, patient benefit and treatment satisfaction are considerably lower in the web based surveys compared to the current paper-and-pencil surveys. The results indicate that patients with acne evaluate their health care situation worse than patients with other skin diseases. However, these differences are small indicating that the kind of disease is of minor importance. Striking results are the big differences between web based and paper-pencil-based data with regard to the patients' evaluation of their health care situation. This implies that the evaluation of health care depends on the way of surveying. The satisfaction with health care may be overestimated because it's mainly based on paper-and-pencil data collected in "traditional" settings.

Keywords: *health care, dermatological diseases, online surveys*

Patients' beliefs about CBT and their relationship to outcome in panic disorder and agoraphobia

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This project aimed to investigate relationships between treatment knowledge, beliefs and outcome in Panic Disorder and/or Agoraphobia (Panic-Ag) following cognitive behaviour therapy (CBT). Research from the psychotherapy and medical literature indicates patients' treatment knowledge and beliefs, specifically acceptance of the treatment rationale (ATR), expectancies of treatment outcome (ETO) and treatment self-efficacy (TSE), are associated with clinical outcomes for a range of disorders. However, many studies are methodologically flawed or have not been conducted in the field of Panic-Ag. It was hypothesised that treatment knowledge, ATR, ETO and TSE would be related to outcome, with associations mediated by belief in catastrophic cognitions. Measures of treatment knowledge, ATR, ETO and TSE were firstly developed using patient and clinician samples. The psychometric properties of these measures were satisfactory. Associations

between CBT knowledge, beliefs and outcome were investigated among 41 Panic-Ag participants. There were four outcome measures: panic attack frequency, panic sensation severity, frequency of catastrophic cognitions and agoraphobic avoidance. Measures were administered at pretreatment and six-month posttreatment. Improved treatment knowledge was significantly associated with frequency of catastrophic cognitions and agoraphobic avoidance. Posttreatment TSE was significantly associated with panic attack sensation severity, frequency of catastrophic cognitions and agoraphobic avoidance. Contrary to the hypothesis, ATR was not related to outcome. Pretreatment beliefs were also unrelated to outcome. Mediation analyses revealed relationships between TSE and outcome were partially mediated by belief in catastrophic cognitions while relationships between treatment knowledge and outcome were not. These findings may have clinical value by assisting clinicians in identifying patients with insufficient knowledge and/or poor confidence in following treatment recommendations who may be at risk of poor clinical outcomes. Methodological limitations, clinical implications and future research directions are also discussed.

Keywords: *panic disorder, agoraphobia, cognitive behavioural therapy*

Pediatric medical traumatic stress: Prevalence, risk and prevention

KENARDY, J.

Serious non-intentional injury resulted in at least 2,500 hospital admissions per 100,000 children in Australia in 2003-2004 (AIHW, 2007), where a third of children who are admitted to hospital for traumatic injuries develop clinical levels of traumatic stress in the three months following admission. Many of these children go on to recover but about one in ten children tend to go on to have ongoing psychological problems. Furthermore the effects of hospital experiences have also been documented in child transplant recipients and cancer survivors, as well as children who have been admitted to Paediatric Intensive Care Units. The term Medical

Traumatic Stress has been used to describe the psychological and physiological responses of children and their families to pain, injury, medical procedures, and invasive or frightening treatment experiences. The presentation will describe a program of research aimed at delineating the extent of Medical Traumatic Stress in children, and responding to it. This includes a prevalence study examining new onset psychological disorder following admission; development of risk screening tools to children; preventative intervention evaluation; and early intervention within a stepped care model.

Keywords: *paediatric medical traumatic stress, prevalence, risk screening, preventative intervention*

Perceived organisational support, positive employee attitudes, and the mediating influence of trust and fairness

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Using a social-exchange theoretical framework, we examined the mediating influence of trust in senior management and perceived procedural fairness on relationships between Perceived Organisational Support (POS) and employee-level outcomes of psychological strain, job satisfaction and affective organisational commitment. POS was operationalized as employees' awareness of stress-reduction strategies implemented in their workplace. We present longitudinal data from 861 academic and professional staff at 13 Australian universities who were surveyed in 2000 and 2003/4 as part of the Australian University Stress Study. Results of bootstrapping analyses found that employee perceptions of senior management trustworthiness, and perceived procedural fairness both mediated the positive relationship between POS and organisational commitment, and between POS and job satisfaction. Furthermore, perceptions of senior management trustworthiness and procedural fairness also mediated the negative relationship between POS and psychological strain. When trust in senior management and perceived

procedural fairness were simultaneously entered in the mediation analysis, both were found to mediate the relation between POS and psychological strain, job satisfaction and organisational commitment. The results suggest that POS fostered perceptions of senior management trustworthiness or perceptions of procedural fairness, and in turn, employees responded with lower levels of psychological strain and/or pro-organisational attitudes such as job satisfaction and affective organisational commitment. Our findings add support for the mediational role of both trust in senior management and perceived procedural fairness. Further implications for organisational practice are discussed, and avenues for future research are suggested.

Keywords: *management, job satisfaction, organisational commitment, procedural fairness, trust*

Perceived stress, stress appraisal, and coping strategies used in relation to exposure of terrorism on television

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The present study was conducted to investigate perceived stress, stress appraisal, and coping strategies used in relation to television exposure to terrorism. It was hypothesized that there is positive relationship between perceived stress, stress appraisal, coping strategies and television exposure of terrorism. A sample of 98 students (50 Males, 48 Females; age between 20-25 years) was selected from the Departments of "Faculty of Life Sciences" University of the Punjab, Lahore, Pakistan. A demographic questionnaire, Perceived stress scale (PSS) (Cohen, 1983), Stress appraisal measure (SAM) (Peacock & Wong, 1990), and Coping strategy questionnaire (CSQ) (Kausar, 2001) were used for assessment. Data was analyzed using correlation, t-test, and regression analysis. The results indicate that there is significant relationship between perceived stress, stress appraisal, coping strategies and television exposure of terrorism. There were significant gender differences in perceived stress, stress appraisal, and coping strategies. Depiction of

incidences of terrorism on television is causing immense stress to the viewers and the findings have important implications for digital media which is giving live coverage to terrorism activities for its viewers.

Keywords: *perceived stress, stress appraisal, coping strategies, terrorism, media*

Perceptions of acceleration at work: theoretical considerations and empirical results

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In many modern work places employees are confronted with numerous changes. They also experience an *intensification and acceleration* of these changes. The sociologist Hartmut Rosa (2005) developed a sociological conceptualization on the process of acceleration in modern societies. We tried to transfer his sociological model into work and organizational psychology by integrating his assumptions into a general Job Demands-Resources (JD-R) model. The model contains three core assumptions: (1) In current work places, acceleration may be perceived by the employees, (2) there are acceleration specific job demands and job resources, (3) specific interactions between demands and resources influence the quality of working life (e.g. job satisfaction, burnout, engagement) in positive and/or negative ways. A questionnaire was developed measuring perceptions of acceleration and specific job demands and job resources related to acceleration. An item pool was generated based on a comprehensive literature search and on content analyses of focus groups. The following aspects were included in the scale development: (a) perceived changes/increases of working amount per time unit and perceived changes/increases of working outputs; (b) perceived changes in time resources, e.g., changes/decreases of pause times, changes/increase of working hours; (c) perceived changes in organizational conditions, e.g., deadlines and deadline pressure; (d) perceptions of acceleration based job resources, e.g., changes in degrees of freedom and changes in social resources; (e) personal resources helping to adapt to change, e.g., self efficacy and self

regulation. The model was tested in three cross-sectional samples: 260 office workers (study 1); 1.810 human service workers (study 2) and university employees (study 3; data collection will be finished Jan. 2010). The three dimensions of acceleration (Rosa 2005): “technological acceleration”, “acceleration of organizational/social change” and “acceleration of pace of life” could be confirmed. Strong perceptions of acceleration were observed in the areas of “documentation”, “number of emails”, “information needs” and “work speed”. Only “acceleration of pace of life” was perceived as a stressor related to burnout. Perceptions of technological acceleration are related to work engagement. Perceptions of acceleration were confirmed as “new” work demands. Depending on the resources of employees these demands could be either positive or negative. In preventing negative effects of acceleration, resources need to be developed. A special prevention focus needs to be given on elder and/or low educated employees.

Keywords: *acceleration at work, perceptions, job demands, job resources*

Perceptions of legitimacy of political violence amongst Saudi Arabians

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The paper examined factors influencing perceptions of legitimacy of political violence against either Western targets or targets within Saudi Arabian targets. In particular it examines motives ascribed to those who commit political violence against the two types of targets, the perceived causes for these phenomena, what beliefs and attitudes (e.g. beliefs in a just world, moral disengagement) and emotions are related to perceptions of legitimacy of political violence and what patterns of identification (religious, national) are related to such perceptions. The study involved conducting two surveys of Saudi Arabian students ($N=287$ and $N=271$). Data collected using self-completed questionnaires which included socio-demographic variables, measures of Religiosity, perceived threats, perceptions of history, attitudes toward the West, Intergroup contact, national identity, religious identity, shared grievances, emotions,

just world beliefs, moral disengagement and perceived legitimacy /illegitimacy of political violence against the West. Path analyses have showed that income, negative attitudes towards the political violence in the West, perceiving West as a threat and moral disengagement were predictors for the perceived legitimacy of the political violence against the West. In the case of perceived legitimacy of political violence in Saudi Arabia, age, marital status and exposure to violence, the type of, and number of victims, views of socio-political causes, emotions, moral disengagement and beliefs in just world were found to be statistically significant predictors for the perceived legitimacy of the political violence in Saudi Arabia. Our findings suggest that there are some similarities and differences in the factors which are associated with perceived legitimacy in political violence in the participants' own country and that carried in the West. They also contribute to our understanding of lay theories of political violence amongst a Muslim population.

Keywords: *perceptions, legitimacy, political violence, attitudes, identification*

Personal and organizational factors facilitating job involvement among Nigerian workers

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The study was aimed at determining the personal and organizational factors that facilitate job involvement among Nigerian workers. Data were collected from 600 subjects randomly selected from the shoe, textile and food manufacturing industries in Lagos, Nigeria. The sample included 150 junior workers, 90 supervisors and 60 managers. There were 495 males and 105 females in the sample. Analysing the data, the t-statistics did not reveal any significant difference in job involvement between male and female workers at ($p > .05$, $df = 598$, $t = 1.12$). The One-way ANOVA showed significant differences in job involvement among the three categories of employees at ($p < .01$, $df = 2/597$, $F = 8.87$). There were also significant differences in job involvement among the three industries at ($p < .01$, $df = 2/597$, $F = 11.92$). Analysing the data further, the step-wise

regression results showed that job involvement is positively influenced by organizational responsibility and negatively influenced by the workers' age, work satisfaction, warm climate and the type of industry. The results indicated that job involvement is significantly influenced by interpersonal, intergroup and organizational climate factors at ($p < .01$) respectively.

Keywords: *organisational factors, Nigerian workers, job involvement, organisational climate*

Personality and demographic predictors of aggressive and distracted driving: implications for traffic safety

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This study examined how the tendency to drive aggressively and the tendency to engage in distracting behaviors while driving relate to each other and to personality characteristics and demographic variables. The relationship of aggressive and distracted driving to self-rated driving ability and to the perceived likelihood of accident involvement was also studied. 137 male drivers and 137 female drivers (mean driving experience = 11.9 years, $SD = 12.5$ years) completed a survey designed to measure two forms of aggression (physical aggression and trait anger), perceived invulnerability, and driving history. They also rated their own driving ability, estimated their likelihood of accident involvement, and indicated how often they engaged in aggressive driving, such as tailgating, and how often they performed distracting tasks, such as texting while driving. Aggressive and distracted driving were highly correlated with each other. Both behaviors declined with increasing driving experience. There were no sex differences in distracted driving. However, aggressive driving was more common in males than in females, which appeared due to higher levels of physical aggression in males. Trait anger was positively correlated with both aggressive and distracted driving, while perceived invulnerability was correlated only with aggressive driving. There was no relationship between self-rated driving ability and aggressive or distracted driving, but the likelihood of accident involvement was positively correlated

with both aggressive and distracted driving. Therefore, aggressive and distracted driving are distinct behavioral tendencies: they both decline as drivers mature, but they differ in their relationship to the driver's sex and personality characteristics. Drivers do not regard aggressive or distracted driving as affecting their driving ability. However, they do recognize that these behaviors place them at greater risk of accident involvement, suggesting that interventions can be designed to capitalize on this knowledge and leverage it to reduce aggressive and distracted driving.

Keywords: *driving behaviour, distracting behaviours, personality characteristics, Aggression*

Personality as predictor of pro-environmental attitudes and behaviours

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Several studies have examined the influence of individual differences variables on environmental engagement. Along with gender, age and education, variables such as values, time perspective, self-construals and connectedness with nature have been linked to environmental attitudes (EA) and behaviours. Specific personality traits have also been examined. Traits such as responsibility, conscientiousness and self-confidence have been found to relate to pro-EA, while selflessness and responsibility have been found to relate to ecological behaviours. However, to our knowledge there has been no systematic research exploring the effect of the Five-Factor Model (FFM) of personality on EA and ecological behaviours. We conducted two studies to address this gap in the literature. A total of 332 undergraduate students took part in Study 1 (70% female, mean age = 19, $SD = 2.6$), and a community sample of 150 participants took part in Study 2 (54% female, mean age = 33.8, $SD = 15.9$). Participants completed an online survey containing FFM measures (Study 1: Ten-Item Personality Inventory; Study 2: Big Five Aspect Scale), the New Environmental Paradigm (NEP) Scale, the Environmental Attitudes Inventory, and

ecological behaviour measures. Hierarchical multiple regressions analyses were performed to examine the relationship between the Big Five dimensions and EA and ecological behaviours, controlling for age and gender. Only Openness to Experience consistently predicted people's environmental engagement in both studies. The findings are consistent with another recent study showing that Openness to Experience predicts environmentalism, and also with studies showing the link between this personality dimension and universalism and self-transcendence values, which have been shown to relate to pro-EA and ecological behaviours. Thus, those people who are open-minded, hold a more altruistic viewpoint and are innovative in their outlook and behaviour tend to be more environmentally engaged. However, the effect sizes in our studies were small to medium, suggesting that the predictive power of personality on environmental engagement is low. This is a positive finding suggesting that intervention campaigns can influence people's environmental engagement. Theoretical and practical implications of the findings will be discussed, and directions for future research outlined

Keywords: *environmental engagement, individual differences, big five model of personality*

Personality correlates of colorectal cancer

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The attempt to identify personality types that tend toward cancer is of long standing. Yet previous studies have led to inconclusive findings (e.g., Type C). The goal was to identify relevant personality characteristics of colorectal cancer patients by applying a new psychological methodology grounded in the cognitive orientation theory. The major tool was the cognitive orientation questionnaire of colorectal cancer that assesses four types of beliefs (about self, norms, others and reality, and goals) in regard to themes determined in pretest depth-interviews with colorectal cancer patients and healthy controls. The questionnaire was

administered to 230 colon cancer patients and two control groups: 165 matched healthy controls, and 90 patients with Crohn's disease, who also served as controls because they are known to be at risk for colorectal cancer. Discriminant analysis showed that the questionnaire provided a highly significant correct identification of cases of the three groups. The cancer group scored highest, the healthy controls lowest, and the Crohn's patients in the middle. The thematic clusters that constitute the personality correlates of colorectal cancer were found to be tendencies for compulsiveness, control of oneself and especially of anger, self effacement, pleasing others, self assertion, distancing oneself from others, keeping regulations, and performing to perfection all ones obligations. These tendencies form three major foci which are: perfect duty performance, and two contradictory pairs: self effacement versus self assertion, and closeness to others versus distancing from others. The clusters and the contrasts constitute potentially sources of tension. It is suggested that the identified personality correlates could be considered as psychological risk factors for colorectal cancer and could serve as basis for psychological interventions.

Keywords: *personality types, colorectal cancer, cognitive orientation theory*

Personality traits and schemas characteristic of avoidant and narcissistic personality disorders

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The aim of the current study was to identify personality traits and maladaptive cognitive schemas characteristic of avoidant and narcissistic personality disorders so as to better understand the underlying features of these disorders. A non-clinical sample of 293 individuals ($M= 26.19$ years, $SD= 9.88$, age range = 18-72 years) completed measures of personality traits, early maladaptive schemas, personality disorders and core beliefs hypothesised to be associated with the personality disorders. Hierarchical multiple

regression analyses indicated that 76% and 74% of the variance in avoidant and narcissistic personality disorders, respectively, could be explained by traits and schemas. Specifically, results indicated that the most salient predictors of avoidant personality disorder were traits such as self-consciousness, avoidant beliefs, and the early maladaptive schemas of emotional inhibition, abandonment, social isolation and subjugation. In contrast, the most salient predictors of narcissistic personality disorder were traits such as low values, narcissistic beliefs and the early maladaptive schemas of entitlement/grandiosity, admiration-seeking and social isolation. Importantly, cognitive schemas and beliefs accounted for additional variance in these personality disorders over and above the variance explained by traits alone. The findings from this study highlight the important role of schemas in the maintenance of personality disorders and have direct implications for their assessment and treatment. Specifically, the findings suggest that more research is needed regarding the current call to re-conceptualise personality disorders solely through the use of dimensional trait models. The findings also suggest that the effectiveness of schema modification approaches to treating the personality disorders should be explored further.

Keywords: *personality traits, cognitive schemas, avoidant personality disorder, narcissistic personality disorder*

Person-job and person-organisation fit as predictors of intentions to quit: steps towards retaining Pacific healthcare workers in New Zealand

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In New Zealand, Pacific peoples are high users of healthcare services, with higher rates of certain chronic diseases (e.g., diabetes) and lower life expectancy relative to the general population. The retention of healthcare workers, who reflect the local population of healthcare users, is likely to lead to the best health outcomes for that population. Hence, the retention of Pacific healthcare workers is critical issue. This research aimed to test the attrition aspect of

Schneider's (1987) attraction-selection-attrition theory, that Pacific healthcare workers with poorer fit to their jobs and organisations would show a greater intention to quit. Survey data were collected from 104 Pacific healthcare workers from the three District Health Boards in the Auckland region. Surveys were distributed via managers and team leaders. Most participants were female (70%), 41-45 years, and in full-time employment (83%). The main ethnicities reported were Samoan (51%), Tongan (19%), and Cook Island Maori (13%). Both person-job and person-organisation fit predicted job satisfaction, organisational commitment, and intent to quit; person-organisation fit was the stronger predictor of these. Both job satisfaction and organisational commitment mediated the relationship of the fit measures with intent to quit, although this was only partial mediation for job satisfaction on the relationship of person-organisation fit with intent to quit. Our study is the first to concurrently look at the broader picture of different types of fit, as well as attitudes of job satisfaction, organizational commitment, and intent to quit. Our results show that person-organisation fit is a more important variable in considerations of intention to quit than person-job fit. Thus, referent-matching does not seem to influence results. Efforts to improve Pacific healthcare workers' retention should focus on increasing perceptions of person-organisation fit, and also organisational commitment, since this was the key mediation path.

Keywords: *health care services, attraction-selection-attrition theory*

Phases of innovation – Do they exist?

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Innovation processes have often been divided into several phases; most models of innovation identify at least two phases: creation and implementation. These phases imply activities that are quite different from each other, for example, exploration and exploitation. We argue that although the activities that accompany different phases might be distinguishable from each other, distinct linear phases do not occur in

innovation projects. Instead, the activities implied by the four phases proposed by Farr, Sin, and Tesluk (2003) – problem identification, idea generation, idea evaluation, and implementation – are important throughout the whole innovation process. We used a longitudinal design with four to six measurement waves to study the activities of 80 student teams working on an innovation project for up to one semester. In every measurement wave, students indicated to what extent they conducted activities concerning the four innovation phases (2-3 items per phase). In addition, students assessed several cognitive and motivational variables (e.g. future-related cognitions, momentum) as well as stable individual differences (the latter were assessed only once). Multilevel confirmatory factor analyses confirmed that innovation activities could be distinguished both on measurement wave level and on team level. However, innovation phases were very highly interrelated (correlation coefficients of above .85), that is, innovation activities tended to co-occur. In addition, we could show that the different innovation activities proposed by Farr et al. (2003) are differentially related to diverse cognitive and motivational variables as well as stable individual differences. Our results confirm that innovation phases do not occur in a linear manner. Instead, innovation activities – such as generating ideas and implementing ideas – are important throughout a whole innovation project. In addition, different innovation activities require quite different motivational and cognitive conditions. Taking together these two results, we argue that innovation projects necessitate an ability to handle these cognitive, motivational, and behavioral demands simultaneously. Thus, our study underlines the importance of ambidexterity in innovation projects – the ability to handle the tension between different or even contradictory activities.

Keywords: *innovation, phases, creation, implementation, individual differences*

Phenomenological experiences of teenage mothers in Limpopo Province, South Africa

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This paper is based on the results of a phenomenological investigation that sought to understand the experiences of teenage motherhood by young women with a view to describing how this developmental experience has formed part of their lives. The study was prompted by the recognition of considerably higher levels of teenage pregnancy in Limpopo Province. Using snowball sampling method, five women aged between 26 and 35 were selected to participate in the study. Data was collected through qualitative interviewing. Five psychological themes associated with teenage motherhood were identified. These are: (a) lack of knowledge about sexual relationships contributes to teenage motherhood; (b) early childbearing has a negative impact on the teenage mother's interpersonal relationships; (c) teenage mothers tend to experience emotional problems after delivery of their babies; (d) teenage motherhood has long term disruptive effect the teenage mother's educational and occupational opportunities; and, (e) teenage motherhood leads to significant lifestyle changes for those who have been through the experience. In view of the above themes, sexual education both at school and at home is suggested as a more viable option to help minimize the risk of teenage motherhood in society. Together with other intervention, sexual education could also help in reducing sexually transmitted infections including HIV and AIDS.

Keywords: *teenage motherhood, sexual education, interpersonal relationships, lifestyle, emotional problems*

Pilot evaluation of a depression training program for eye health professionals working with patients with vision impairment

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Depression is common in people with vision impairment and has been shown to exacerbate disability and further reduce levels of functioning. Despite this, depression is rarely detected and often remains untreated in this group. The current study was designed to

evaluate the effectiveness of a training program to assist eye care professionals to better recognize and respond to depression among people with vision impairment in hospital and community settings. 36 professionals completed the training program consisting of three 1.5 hour small group training sessions held over three consecutive weeks. The modules covered (1) Understanding depression, (2) Detecting depressive symptoms, (3) Developing and implementing referral pathways. Participants were provided with information, tools and resources and encouraged to develop local procedures and processes in their specific work contexts. A pre-post evaluation study was conducted to assess the impact of the training program. Five groups were conducted and included ophthalmic nurses and orthoptists from tertiary eye care services as well as optometrists and low vision rehabilitation staff working in community settings. The training program significantly improved knowledge of depression and confidence in responding to depression in people with vision impairment ($p < 0.05$). Barriers to managing patients with vision impairment and depression were significantly reduced ($p < 0.05$). The likelihood of providing information and education about depression, using a depression screening questionnaire, referring the patient to their GP for depression management also significantly increased ($p < 0.05$). The initial results of this pilot study suggest that a brief training program is able to increase practitioners' knowledge, confidence and intentions to change practice. Further work is required to determine if these improved skills are sustained over time and actually improve the recognition and successful management of depression in people with vision impairment.

Keywords: *depression, vision impairment, training programs*

Positive and negative job affects as psychological indicators of job stress in Brazilian workers

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One of the main effects of the recent changes in work organization is job stress. This phenomenon has been considered as a stimulus,

as a process or as a response to the adverse conditions that individuals face in work and organizations. The continuous exposure to these conditions can cause physical, behavioral and psychological reactions. Job satisfaction has been for a long time one of the most used psychological indicators of job stress. However, the job affects, that is, the positive and negative emotional reactions toward work, can also be used as an indicator of psychological health and well-being in the workplace. The purpose of this research is to investigate the effects of some stressors on positive and negative job affects. The sample was comprised 630 Brazilian workers of both sexes, from industry, retail and service sectors. Stressors were measured using a Brazilian scale of 35 items distributed in seven factors: role conflict and ambiguity, workload, social support, work-family conflict, job instability, autonomy and responsibility. Whereas, job affects were evaluated using a Brazilian scale of 28 items divided into two factors, that is, positive and negative affects. The results from the hierarchical multiple regression analyses showed that the role conflict and ambiguity and workload are the only negative predictors of positive job affects, while on the other hand, responsibility is a positive predictor of the same criteria variable. In addition to this, the workload was the only positive predictor of the negative job affects. It has been concluded that job affects can be used as psychological meaningful indicators of job stress in future research.

Keywords: job stress, job satisfaction, job affects, well-being, work-family conflict

Positive politics – turning politics to organizational advantage

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This paper assesses the viability of a positive conceptualization of organizational politics. The question of whether organizational politics can be reframed as both an organizational resource and a demand is considered. A model incorporating both the positive and negative dimensions of organizational politics is proposed. Research regarding perceptions of

organizational politics is reviewed to determine whether conceptualizations of organizational politics are generally negative, neutral or positive. Particular attention is given to measures of organizational politics. Other constructs are integrated throughout the review including political skill, organizational engagement and organizational climate. Organizational politics is generally conceptualised in terms of undesirable and self-interested behaviors such as back-stabbing, self-promotion and ingratiation and existing measures are negatively balanced. The literature also suggests that organizational politics should be eradicated. In contrast, political skill is conceptualised positively. Other research presents a functional and more balanced view of politics where politics plays an important role in decision-making and during times of change. Researchers have therefore called for more balanced perspectives on and measures of organizational politics. A functional definition of organizational politics is proposed where organizational politics involves using inside knowledge of an organization and collegial networks to turn formal or informal processes to personal and team advantage. This enables accomplishment of objectives and reputation enhancement of individuals and teams. A proposed model of organizational politics suggests that organizational politics can be viewed as a job resource or a job demand and this perspective can lead to negative or positive political climates. Work is needed to develop a measure of positive political climate and to assess the viability of the proposed model.

Keywords: organizational politics, organizational climate

Positive with pets: The positive impact of pet ownership when living with HIV

HUTTON, V. (Monash University)

In developed nations, a diagnosis of HIV no longer entails the development of AIDS, and its medical management is that of a chronic rather than fatal disease. While in the 1980s, companion animals were seen as a potential source of infection and their removal from the home encouraged, today around half of all

Australians living with HIV also live with a pet. Significantly, around 60% of Australians living with HIV and pets report receiving a lot of support from their pet, second only to their partners. The aim of this study was to investigate the role of pets in the lives of people living with HIV in developed nations, specifically, the impact of pet ownership on emotional wellbeing. Participants were 160 people from developed nations living with HIV, ranging in age from 18 to 66 years. The sample predominantly comprised homosexual men, reflecting the overrepresentation of this group in the HIV positive populations of developed nations. All participants completed a composite questionnaire comprising measures of social support, unsupportive social interactions, HIV-related emotional wellbeing, general health and demographic variables. Pet owning participants also completed an instrument measuring their attachment to their pet. Participants chose to complete the questionnaire either online or in pen and paper form. Eighty per cent of participants owned pets compared to 63% of all Australian households. All participants reported experiencing unsupportive social interactions related to their diagnosis, and worried about the effect of stress on their health. However, pet owning participants reported higher levels of emotional wellbeing than non-pet owning participants. Pet owners also reported valuing their pet's non-judgmental support, companionship and ability to make them feel happy. Importantly, almost all pet owners (98%) agreed that loving their pet helped them stay healthy. This study provides evidence of a positive relationship between pet ownership and emotional wellbeing amongst people living with HIV. It is argued that if such health promoting relationships are found to reduce the disease burden of HIV, they should be not only encouraged but supported by the health systems of developed nations.

Keywords: *HIV, AIDS, pets, support, emotional well-being*

Precarious abodes: Hues of red, black and grey - a psychological exploration into the lives of Indian women in prostitution

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The aim of the present study was to explore the psychological themes that surface on interviewing women in prostitution about their sexuality and the self. This was a qualitative study in which five unstructured interviews were conducted, of about two hours duration each, over the span of two months. Eight women in prostitution were interviewed within their naturalistic settings. The questions were based on the themes of sexuality and the self. Data were analyzed and interpreted using broad understandings from the psychodynamic approach and the gender discourse. The study found recurring themes such as the presence of troubled childhoods, which formed the template for traumas of a possibly inter-generational nature, the trauma being experienced throughout their lives. In addition, an inter-linkage and conflict was found between internalized moral voice and the continuation of prostitution which resulted in the use of defence mechanisms and a limited range of affects that centered around rage, grief, loneliness, alienation, fear, guilt and shame, self-hate, emptiness and pain. In naming this paper, 'Precarious Abodes: Hues of Red, Black and Grey' – the uncertainties of containment show up in the reds, being conflicts in these women's lives, the blacks of separation and the greys of agency, choice and human volition. It can be concluded that a psychological exploration into the inner worlds of women in prostitution is difficult but possible and that any health-care program designed for them, or questions regarding the legality and morality of prostitution, need to relate to the experiences of these women. This is only possible after a long-term engagement with them and an attempt to understand the factors that affect their decisions and the circumstances of their living conditions.

Keywords: *women, prostitution, sexuality, self, trauma*

Predicting employees' wellbeing using job strain and work-family conflict

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This study aimed to examine the effects of job-strain and work-family conflict models on the perceived wellbeing of Iranian employees. A hierarchical multiple regression analysis on data from 387 Iranian employees was used to predict the relationship between job strain, work-family conflict and wellbeing variables. The results of the hierarchical multiple regression analysis revealed that strain-based working-family conflict along with job characteristic variables (i.e. supervisory support, job demands, and job control) make a significant contribution to the predictions of an employee's affective wellbeing, particularly their job satisfaction. Implications are drawn and recommendations made regarding future research and interventions in the workplace.

Keywords: *job-strain, work-family conflict, well-being*

Predicting neuropsychological performance among HIV-positive adults

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With 25% of those with HIV being 50 and over, there is concern that cognitive deficits may become exacerbated as people age with this disease. The objective of this study was to identify predictors of neuropsychological performance among adults with HIV. The sample included 98 HIV-positive adults with a mean age of 45.2 years. Participants completed psychosocial measures (Lubben Social Network Scale, Profile of Mood States, drug use) as well as neuropsychological measures of speed of processing (Useful Field of View, Complex Reaction Time Test, Digit Symbol Substitution), executive function (CLOX, Trails B), psychomotor ability (Trails A, Finger Tapping Test, Digit Symbol Copy), and memory (Digit Span, Spatial Span). Regression analyses were used to investigate predictors of neuropsychological performance. Step 1 of the analysis examined the effect of age and education quality (WRAT-3 Reading), and step 2 examined the effect of health factors on neuropsychological performance. Results indicated that older age,

poorer educational quality, mood problems, and higher drug use predicted poor performance on several of the neuropsychological measures. The individual regression models for each of these measures explained 8-34% of the variability. Overall this study posits that among adults with HIV, the best predictors of neuropsychological deficits were older age and poorer quality of education. Additional predictors of cognitive deficits included mood problems and drug use. Health factors such as years diagnosed with HIV, and the size of one's social network were not found to be predictors in any of the models. These results suggest that those aging with HIV are subject to decreases in cognitive functioning. Implications for clinical and research settings are provided.

Keywords: *HIV, neuropsychological performance, cognitive deficits*

Predicting positive and negative change in Australian expeditioners following Antarctic employment

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The aim of the present study was to identify factors that influence positive and negative change in Australian expeditioners following Antarctic employment. 423 expeditioners completed a series of self-report measures assessing individual, organizational, and relationship dimensions at pre-departure, absence, reunion and reintegration. Data was analyzed using backward stepwise regression equations to determine the relative contribution of individual, organizational, and relationship dimensions across the employment experience in predicting self-reported positive and negative change following Antarctic employment. At both two and twelve months post-return positive change was predicted by a combination of individual, organizational, and relationship dimensions reported at pre-departure, absence, and reunion. At reunion negative change was predicted by a combination of individual, organizational, and relationship dimensions reported at absence and reunion. Negative change at reintegration was predicted by a combination of individual, organizational, and relationship dimensions reported at pre-

departure, absence, reunion and reintegration. Positive and Negative change reported by Australian expeditioners at both reunion and reintegration is predicted by experiences at these and preceding phases of the Antarctic employment experience. As such, proactive prevention and intervention strategies aimed at enhancing the Antarctic employment experience for Australian expeditioners should address each phase of employment from pre-departure through reunion and reintegration. In turn, such intervention may enhance employee well-being, performance, and retention.

Keywords: *change, Australian expeditioners, Antarctic employment, employee well-being*

Predicting the risk of financial trust violation: Assessing the interaction of work environment and offender characteristics

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Financial trust violation is extremely costly but researchers from criminology, psychology and management/security are yet to agree on a standard model to explain this offence. The aims of this thesis were to: (i) develop a model to enhance our understanding of the core processes of financial trust violation, (ii) develop an assessment tool that evaluates the core processes of financial trust violation in individuals, (iii) review the personality traits within financial trust violators and how these impact on the core processes and (iv) to understand the role that the perceived security precautions of the organization and the organization's actions and culture designed to support an ethical environment has on the core processes of financial trust violation. The Business Security Questionnaire (BSQ) was designed using Cressey's (1953) model and supplemented with recent employee theft research to assess the core processes of: demographic factors, motivations, opportunity, values, evidence to support violation and rationalisations. The personality factors investigated were the neurotic personality type and 'white collar' psychopathy which were assessed by Young Schema Questionnaire (YSQ;

Young & Brown, 1999) and the B-Scan (Babiak & Hare, 2004) respectively. Thirty incarcerated individuals (18 men and 12 women) from Victoria, New South Wales and South Australia convicted of financial trust violation from their own company or employer were assessed. The core processes were largely supported, especially through highly endorsed specific items but environmental factors did not have an impact on these processes. The YSQ showed that the schemas of self sacrifice and unrelenting standards and the B-Scan scales of blaming and shallow were elevated in this population. Significant gender differences and a range of specific relationships between elevated schemas and B-Scan scales were found between core processes of financial trust violation. A comprehensive model of financial trust violation is feasible and key foundation items were developed in this research for a precise measure of the risk of a staff member of committing a financial trust violation.

Keywords: *financial trust violation, personality traits, assessment tools, schemas*

Predicting work engagement, turnover intentions and family satisfaction over time: Organizational support, hindrance and work-life balance.

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This research assessed the impact of organizational cultures that either supported or hindered employees' use of organizational work-life balance policies. It was expected that supportive organizational cultures would be consistent with work engagement, family satisfaction and reduced turnover intentions over time. Australian workers ($n=540$) were surveyed on two occasions with a one year time lag. Measures of organizational culture, use of work-life organizational policies, work engagement, family satisfaction and turnover intentions were included in the study. Structural equation modeling analyses assessed the ability of (Time 1) organizational culture and work-family policies to predict work engagement, family satisfaction and turnover intentions over time (at Time 2). As expected, we found that a

workers' use of Work-Family Organizational Policies (WFOPs) was positively associated with supportive organizational cultures. Hindering organizational cultures demonstrated negative relationships with perceptions of organizational support. Organizational support predicted work engagement at time two, but demonstrated no direct associations with either time two family satisfaction or turnover intentions. Instead work engagement was positively associated with family satisfaction and negatively associated with turnover intentions. This research demonstrates that a supportive organizational culture in terms of the provision of appropriate WFOPs, is important to the facilitation of the interface between employees' work and private lives. Importantly, a supportive organizational culture is pivotal to the engagement of workers. Work engagement in turn, has implications for both organizations and employees; directly influencing employees' work commitment and family relationships. This research clearly demonstrates that organizational managements cannot afford to ignore the impact of supportive workplace cultures on the psychological well being of their employees.

Keywords: *organisational culture, turnover, work-life balance, support*

Predictors of mental health and quality of life in adults with craniofacial conditions

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Adults with craniofacial conditions reportedly experience higher levels of psychosocial problems than the general population. However, our understanding of the factors that contribute to the mental health and quality of life in these adults is poor due to the limited availability of research. This study examined some of the predictors of positive outcomes in adults who have grown up with a variety of craniofacial conditions. Adults ($n= 95$, mean age 29 years) with congenital craniofacial conditions, who were treated as children in the Australian Craniofacial Unit, completed measures of: mental health (Hospital Anxiety and Depression

Scale), quality of life (SF-36), social support (Multidimensional Scale of Perceived Social Support), self esteem (Rosenberg Self-Esteem Scale), satisfaction with appearance, fear of negative evaluation (Brief Fear of Negative Evaluation Scale) and appearance concerns (Derriford Appearance Scale). Multiple regression analyses revealed that the strongest predictors of anxiety were self esteem, appearance concerns and fear of negative evaluation, while depression was predicted by self esteem and social support. Age, gender and satisfaction with facial appearance did not contribute to either anxiety or depression. The Physical Health Component of the quality of life measure was predicted by satisfaction with facial appearance and appearance concerns, while the Mental Health Component was predicted by social support, self esteem and appearance concerns. Again, gender and age did not contribute to either outcome. These results highlight the importance of self esteem, social support and concerns about appearance to a range of mental health outcomes in these adults, with fear of negative evaluation specifically predictive of anxiety. Of note, satisfaction with facial appearance was unrelated to mental health outcomes, and gender and age were unrelated to all outcomes. These findings underline the importance of thoroughly assessing adults with craniofacial conditions and not simply focusing on satisfaction with appearance. They also provide some possible targets for childhood interventions designed to build resilience in this population.

Keywords: *predictors, craniofacial conditions, psychosocial problems*

Preliminary findings from a randomised controlled trial of mindfulness-based cognitive therapy for recurrent depression

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Major depressive disorder (MDD) is most commonly experienced as a relapsing condition.

Mindfulness-Based Cognitive Therapy (MBCT) is a manualised group based intervention designed to reduce rates of relapse of MDD. It integrates aspects of cognitive therapy with components of a mindfulness-based stress reduction program. The aim of this multi-site randomized control trial is to examine the effectiveness of MBCT in preventing depressive relapse in people who have had at least three prior episodes of depression. We recruited 204 participants with a history of three or more episodes of depression but who were currently well. As an alternative to a treatment-as-usual (TAU) control condition, we developed a control called “Depressive Relapse – Active Monitoring” (DRAM) in an effort to balance treatment expectancy and prevent resentful demoralisation. DRAM comprised a manualised and supported self-monitoring protocol. Participants were randomised to either MBCT plus DRAM, or DRAM alone, and are being followed up for two years. Participants continue their usual treatment during the course of their participation in the trial. Outcome measures include the Patient Health Questionnaire-9, the Composite International Diagnostic Instrument 2.1, and number of days depressed in the past year. The Expectance/Credibility Questionnaire is being used to assess treatment expectancy. We will report findings related to rates of retention, rates of treatment completion and adherence, and treatment expectancy. Although preliminary at this stage of the trial, the available outcome data from the first 12 months of the study will also be presented. The early findings from this trial will provide a tentative indication of whether MBCT is an effective intervention for people with a history of three or more depressive episodes in a setting outside that of the initial developing group, and across multiple sites.

Keywords: mindfulness-based cognitive therapy, relapse, major depressive disorder

Pre-school education for the Turkish speaking Aazaree minority in Paarsee speaking Iran: an attempt at bridging the linguistic gap?

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From a constructivist perspective cultural and linguistic experiences of early years play a significant role in a child's later learning and development. Furthermore, the main objective of pre-school programs is to familiarize children with the school culture and language. Such an objective takes a whole new meaning when we consider students, like Turkish speaking Aazarees in Iran, who are challenged with the bilinguality of home and school since the official language of instruction is Paarsee, the language of the majority ethnic group. The aim of the research conducted was to see if attempts at bridging the linguistic gap through different complementary pre-school programs have been serious enough to be successful. To answer the research questions posed, three groups of Aazaree students and teachers were measured in three different times and ways, all within the school setting. A group of first graders just entering school, another group of students entering second grade, and a group of first and second grade teachers all in one school/district were selected randomly from among all such students and teachers in Maraagheh, a city in East Aazarbaijaan Province. The student groups are inclusive of different subgroups in terms of preschool education. Nevertheless, all were tested on their linguistic preparedness/achievement while the views of teachers were explored on the same subject, and the classroom interactions of some of them with the students were observed. The interval data on students' preparedness/achievement and teachers' views are to be analyzed statistically while the verbal data on classroom interactions will be processed accordingly. The preliminary perusal of the data reveals that in accordance with the expected status of the students, based on similar findings previously obtained, those who have no preschool experience have the lowest preparedness and achievement, while those who have both the regular preschool experience and the special one month program for linguistically different students score the highest. The other two groups are expected to rank in between. The views of teachers are also expected to be negative on the efficiency of the present programs, and positive on the impact of preschool acculturation on achievement. The observational data is expected to show the use of students' home language in the classroom

both by teachers and students. Iran, a mosaic of different cultural and linguistic groupings, while recognizing the right of the ethnic groups to the use of their native languages, imposes the national language, Paarsee, as the official academic language. Over the years witnessing the deficiencies of the non-Paarsee speaking students, attempts have been made to remedy the situation. However, as the projected results show, these attempts have not been that successful and more drastic approaches to the problem are required. Some forms of second language learning or bilingual education could be the path to take.

Keywords: *preschool, bilingual, minority groups, supportive services*

Primary inter subjectivity, early interaction and breastfeeding experience: Maternal satisfaction and depressive onset as risk factors in infant development

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In this study we observed 33 first-time mothers from pregnancy (3rd trimester) to three months after childbirth. We selected the sample from a larger sample of an Italian population attending prenatal courses in Florence area. Women were primiparous, with a stable partner relationship, with no reported previous psychiatric disorders, their pregnancy was without risks factors and the babies were born at the expected date in good health. During pregnancy we assessed the mothers' mood state, couple relationship satisfaction, life time psychiatric disorders and a questionnaire about their social support network. After childbirth we investigated mood state and administered a brief interview on the context of the maternity experience, including breastfeeding practice, and we video recorded a five-minute interaction with the infant according to Murray's method (GRS). Analyses revealed that mothers without signs of depression in pregnancy also maintained low levels of depression postpartum and they showed good "sensitivity" towards the baby. These mothers were also more satisfied with their couple relationship, they reported more satisfaction with breastfeeding their babies and they

continued to breastfeed. On the other hand, mothers who showed mild postpartum depression were less sensitive towards their baby and they reported problems with breastfeeding. Babies of mothers who experienced less satisfaction with breastfeeding were less lively during the video interaction in comparison with babies of mothers who experienced satisfaction, confirming the emotional benefits of breastfeeding and more baby centered attitudes in breastfeeding mothers, when they were supported by their partner and social network. Our data revealed the importance of breastfeeding relationship as first occasion of mother-baby interaction. Breastfeeding can be considered a protective factor also for onset of postnatal depression such as a supportive partner relationship.

Keywords: *first-time mothers, pregnancy, social support, mood, depression*

Proactive personality interacts with job characteristics to enhance role breadth self-efficacy, which promotes work innovation

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Job characteristics and individual differences are thought to be important predictors of role breadth self-efficacy (RBSE; Parker, 1998) and intrinsic motivation (IM), two cognitive-motivational states which are in turn thought to drive workplace innovation (e.g., Amabile, 1988; Parker, Williams & Turner, 2006). IM provides an internal need improve work practices, while RBSE provides a feeling of capability to achieve any improvement steps; both of these are critical in generating and sustaining innovation and other proactive behaviors (Parker, Bindl & Strauss, under review). In cross-sectional studies, Ohly and Fritz (2007) found RBSE predicted innovation better than IM, while Parker and Sprigg (1999) found job characteristics were more predictive of RBSE among employees with more proactive personalities. The present study sought to identify the roles of job characteristics (method control and problem-solving demands) and proactive personality in predicting RBSE and IM, and ultimately on the suggestion and

implementation of work innovations. A survey was administered to 260 full-time employees in Australian organizations, and re-administered to the same individuals three weeks later. Data from both waves were analyzed using structural equation modeling, which can simultaneously assess independent effects on correlated dependent variables while correcting for measure unreliability. Alternative direct and mediation models were used to compare model fit and variance explained when testing study hypotheses. Despite past findings, RBSE was predicted by problem-solving demands only, while IM was predicted only by method control. Innovative suggestions and their implementation were predicted only by RBSE. Proactive personality was associated with neither cognitive-motivational states nor innovation behavior, perhaps because its effects were moderated by job characteristics. For example, RBSE was most likely to be high among those proactive employees who had previously experienced high method control. The data support a model in which direct and interactive effects of job control, demands and proactive personality influence RBSE, which mediates their effect on innovation. The findings highlight the importance of fit between person and situation. Proactive employees may be most likely to innovate in autonomous work situations, where they feel more capable of achieving desired improvements.

Keywords: *job characteristics, individual differences, role breadth self-efficacy, intrinsic motivation, proactive personalities*

Professional psychology training in Australia: How does it prepare psychologists for practice with rehabilitation populations?

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The aim of the present study was to (1) Identify the training opportunities to prepare psychologists for practice with rehabilitation populations in Australia and (2) to explore the conceptualization of training for psychological practice with rehabilitation populations in Australia. A list of all the currently accredited

professional psychology post-graduate courses in Australia was obtained, including the names and contact details of course directors. An email containing information about the study and invitation to participate was sent to the course directors, with a web-link to the online survey. Recipients of the survey invitation email were given one month to respond after this time, and a reminder was sent out one week prior to the closing date. Twenty-one surveys were filled out, with complete data available for 16. The majority of responses related to clinical psychology courses (56%), and other responses were provided for organizational, health, forensic and sport / exercise psychology courses. Of the topics identified as essential for training in this field, the most commonly addressed was 'substance abuse'. 'Recreational functioning' and 'sexual functioning' in relation to illness and injury were the areas that were most frequently not covered. The majority of the courses reported that placements in the areas of developmental intellectual disorders, substance dependence and abuse and psychiatric impairment were commonly available. The majority of courses reported no placements offered in burns, amputation, blindness and/or deafness or congenital conditions such as cerebral palsy. Rehabilitation psychology is currently not a recognized specialty of psychology in Australia, and as may be expected therefore, none of the courses surveyed covered all the required content expected in specialty training in the area in the United States. Opportunities to undertake practical training in some rehabilitation areas appear to be quite commonly available, but this did not include any of the areas of physical rehabilitation. These findings suggest that currently available courses in Australia are inadequate to prepare an appropriately trained workforce, and that none can be conceptualized as providing an effective training program for this area of practice.

Keywords: *psychological training, rehabilitation*

Promoting multilingual competence and academic achievement through mother tongue literacy and activation of cultural knowledge

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Mother tongue (MT) based multilingual education (MLE) is now a well-established framework for quality schooling of minority children (Cummins, 2009). The paper reports findings of a three-year longitudinal evaluation of intervention program, *MLE Plus*, (Mohanty & Panda, 2007; Panda & Mohanty, 2009) among primary grade (Grades I to III) Kui and Saora MT tribal children in Orissa, India. The intervention involved development of literacy and cognitive academic language proficiency in children's MT, used as the language of teaching in the early school years (Grades I to V), and systematic development of multilingual competence from Grade II onwards. Ethnographic documentation of indigenous cultural knowledge and practices helped us plan activities for linking children's everyday cultural practices and knowledge to classroom learning, and facilitate community oracy and literacy engagements. The MLE+ intervention was carried out over a period of three school years beginning with Grade I in eight Government MLE schools for children from Saora and Kond tribes. The intervention was longitudinally evaluated in all the MLE+ schools and compared annually with matched MLE and non-MLE schools (where the tribal children were taught in a dominant language which was not their MT). The findings show that MLE+ interventions resulted in better academic achievement and multilingual development compared to the MLE programs, which, in turn, were found to be better than the non-MLE ones. The MLE+ intervention resulted in greater classroom participation, favorable teacher and community perception of and involvement in MT based school learning. Pedagogic processes in MLE+ program creating multiple points of contact between everyday and school concepts are analyzed. Implications of MLE+ intervention for MLE pedagogy involving minority children are discussed.

Keywords: *multilingual education, academic achievement, mother tongue literacy, cultural knowledge*

Prospective remembering and working memory in a virtual world

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Current laboratory-based prospective memory (PM) paradigms pose problems that are very different from those encountered in the real world. Several PM studies have reported conflicting results when comparing laboratory with naturalistic based studies (e.g., Henry et al, 2004). With artificial stimuli divorced from any situational or social context, the prospective event in an experiment is unlikely to have been encountered outside the laboratory. We used gaming software to provide a cost-effective virtual reality (VR) tool to develop a more ecologically valid setting to study PM whilst maintaining the rigor of the traditional laboratory approach. We explored the relative importance of independent measures of verbal and spatial working memory capacity, retrospective and prospective memory, and planning ability to predict PM failures in healthy young adults. PM performance was extracted from the Virtual Errands Task (EVET) dataset. A total of 157 participants (95 females and 62 males - mean age 19.6 years) attempted eight location based errands in a four storey virtual building (e.g., collect computer from room G4). All participants learned the errand list to criterion and made a plan before starting the test. Individual difference measures assessed retrospective and working memory capacity, planning ability and PM. A PM failure was identified as a situation where a participant entered and exited the "cue" area outside an errand related room without performing the required errand whilst still successfully remembering that errand post test. Multiple regression analysis showed that independent measures of verbal working memory span, planning ability and PM were significant predictors of PM failure ($R^2 = .15$). Inclusion of an efficiency measure of pre-planning for the EVET task was a significant predictor and improved model fit ($R^2 = .22$). Overall, the data demonstrate the potential for VR to provide a realistic, but well controlled PM study. The relationship between the independent measure of PM and the PM failures in the EVET provides construct validity. Results are supportive of accounts that argue for domain-specific working memory processes and highlight a role for verbal working memory in PM. The study also offers a

methodology to address the relatively unexplored role of planning in PM.

Keywords: *prospective memory, virtual reality, working memory, Virtual Errands Task*

Psychological and demographic characteristics of individuals who engage in online sexual activity: An investigation based on sexual orientation

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The number of individuals engaging in online sexual activity (OSA) is a growing trend, and a number of researchers and scholars have argued that the behaviour is pathological (Durkin & Byrant, 1995; Young, 1997). However other researchers (e.g., Griffiths, 2001; Cooper, 1998) have concluded that online sexuality is adaptive, and have emphasised sexual exploration, or highlighted educational benefits and advantages for socially disenfranchised individuals such as gay, lesbian and bisexual (GLB) individuals. Researchers have also suggested that GLB individuals tend to use the Internet more often than their heterosexual counterparts for experimentation and the expression of sexual behaviour (Cooper, Delmonico, & Burg, 2000). The overall aim of this paper is to report the findings of an online study that investigated the relationship between participant's sexual orientation and their OSA. Participant's offline meeting behaviour and personality characteristics are also discussed. The psychological variables investigated included measures of participants' depression, anxiety, stress, impulsivity, social and emotional loneliness, adult attachment style and psychosexual adjustment (e.g., sexual-anxiety, sexual-satisfaction). International data for the current study were collected via an online questionnaire posted into a variety of sexually oriented news groups. Data was collected from 1325 participants aged 18 to 80 years, ($M=41$ years, $SD=13$), with males composing 91% of the sample. 39% of the sample identified as heterosexual, 35% identified as gay/lesbian and 25% identified as bisexual. Participants spent an average of 12.25 hours per week engaged in OSA. Overall, bisexual males were significantly

more likely than heterosexual and gay males to be assessed as being at high-risk of their OSA interfering and jeopardising important areas of their life (i.e., social, occupational and educational). Lesbian and bisexual women were significantly more likely to be classified within the high-risk group than heterosexual women. Males with a secure attachment style were approximately twice as likely to be heterosexual or gay than bisexual. Attachment style was however not related to female participant's sexual orientation. Gay and bisexual males were significantly more likely than heterosexual males to meet someone offline that they first met online, however sexual orientation was not related to offline meeting behaviour for female participants. Increases in depression, anxiety, stress, emotional and social loneliness and impulsivity were associated with increased engagement in OSA for all participants, regardless of sexual orientation. Theoretical, research and clinical implications of the findings will be discussed.

Keywords: *online sexual activity, sexual orientation, sexual behaviour, attachment style, psychosexual adjustment*

Psychological and social influences on inequalities in health in European countries

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The first reference to inequalities in health appeared in the "Report on the Sanitary Condition of the Labouring Population of Great Britain" written by Sir E. Chadwick in 1842. The earliest mention in the last century comes from A. Antonovsky (1967), and from F. Drever and M. Whitehead (1977). Despite this long world history, to date, the history of interest in the topic is rather short in the Czech Republic. The problem of health inequalities was not investigated from 1948 to 1989 in former Czechoslovakia due to political, economic and socio-historical circumstances. The basic data concerning social influences on equity in health in Czech districts (2002, 2005, 2007) are in our study which were compared with results from 18

European countries, and the EU data. A representative sample of Czech citizens were obtained by random quota sampling. Participants took part in a structured interview and responded to questions regarding self-reported health, income, and level of education. Data was also collected from Czech national statistical data on sick leave, unemployment, and income in respective districts of the Czech Republic. The presented data demonstrate the relationships between all mentioned variables. Income, unemployment and sick leave varied in different districts of the Czech Republic: the poorer districts reported a higher morbidity and higher unemployment rate irrespective of the influence of the process of European integration (incl. the EU enlargement). The similarities and differences in social influences were related to health inequalities within the European countries and were demonstrated using the comparison of national and European statistical data, and the correlation analysis of the above mentioned variables. The process of European integration is associated with many problems. One of the most important is the problem of social influences on equity in health, and its psychological reflection at both individual and social levels. Using the European and other best practices, both research and policy strategies in these countries should be focused on the closing this gap.

Keywords: *Czech Republic, health inequalities, unemployment, social influences*

Psychological issues facing international students in Australia

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The aims of this research were to evaluate the psychological issues facing international students in Australia and to investigate the extent to which their psychological needs can be met. The research involved a series of focus groups with international students attending institutions in Melbourne and Sydney in conjunction with illustrative detailed case studies. A content analysis of the main themes arising from the focus groups was conducted. The results indicated that many international

students face significant psychological issues including depression and high levels of stress and anxiety. Many students find it extremely difficult to adapt to the Australian culture generally and more specifically to the Australian post-secondary education system. They express feelings of immense isolation from both family and friends but especially from their family. Many also experience high levels of stress resulting from financial problems and from struggling to pass components of their courses. Students report feeling there is a lack of adequate support systems within their educational institutions and a demonstrated a lack of awareness about how to seek help. There are a substantial number of international students in Australia who are in need of support for a range of psychological issues they experience. Current support systems are inadequate often failing to take into account different cultural backgrounds and failing to provide adequate interventions for these students. It is important that the government address the issue of providing more effective psychological services for these students.

Keywords: *international students, Australia, psychological needs, depression, support systems*

Psychological support to Tsunami victims in Sri Lanka: A 5 year intervention model

MONTEIRO, S. (CeFIPsi)

Helping people in grief to overcome their mourning process and be happy again is a demanding journey but also a challenging one in a therapeutic perspective. Victims of natural or human disasters benefit from psychological support during, at least, the first five years after the event (Demaria & Barrett, 2006). Since February 2005, CeFIPsi's professionals have been psychological (and materially) supporting Tsunami victims in Sri Lanka, Batticaloa district. We have been working in five schools (with near 500 students, total), three nurseries and one orphanage. The main goal of this presentation is to illustrate how psychological support can be effective among natural disaster victims in an east country where the language, culture and death rituals are so different from the western

ones. We have been using Worden (2002) model regarding the four tasks of mourning: (I) accept the reality of the loss; (II) deal with emotions and pain of grief; (III) adjust to the new environment; (IV) emotionally relocate the deceased and moving on with life. To accomplish every goal of each task we used play therapy and educational materials constructed by us before each mission, mainly for that purpose. After five years of psychological support to Tsunami victims we have gathered data from the children and their teachers about the behavioral and emotional changes recognized: recognizing and accepting their negative emotions and thoughts about death and Tsunami; being able to openly talk about it, and returning to the beach. The oldest students have been "co-counselors" for the youngest ones and they also have been contributing to effects generalization. Some considerations regarding social and cultural differences will be made in order to facilitate the job of other Psychologists who have the chance (and aspiration) of working in humanitarian experiences with the purpose of enlarging life quality and well being of others.

Keywords: *grief, mourning process, psychological support*

Psychological trauma in a sample of police officers: A 10 year follow-up study

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Limited longitudinal data exists regarding clinically significant traumatic distress in a sample of police officers. This study followed up a sample of New Zealand Police Officers 10 years after they were last surveyed. A comparison of the levels of traumatic stress was evaluated longitudinally in a sample of New Zealand Police Officers. The police officers were assessed at Time 1 (September 1997 to September 1998), Time 2 (September 1998 to September 1999), and Time 3 (2009). Time 1 was at the commencement of their police training. Time 2 was one year after they had been initially surveyed and this included six months of initial police training. Time 3 was approximately 10 years after the participants had been previously

sampled. Time 1 and 2 involved the utilization of the Impact of Events Scale. Time 3 involved the utilization of the revised version of the Impact of Event Scale. At Time 1, 512 police recruits participated in the research. At Time 2, 326 police officers participated in the research. At Time 2 only serving police officers were invited to continue in the research. At Time 3, 131 individuals continued in the study. At Time 1, 16.73 percent of participants indicated clinical significance. At Time 2, 20.97 percent of participants indicated clinical significance. At Time 3, 11.71 percent of current police officers indicated clinical significance and 25 percent of former police officers indicated clinical significance. The results suggest that clinically significant levels of posttraumatic distress decreases with time as a police officer. Perhaps serving police officers become desensitized to traumatic exposure the longer they are members of the organization.

Keywords: *traumatic distress, police*

Psychology and cross-disciplinary education for mental health practitioners

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There is growing interest in collaborative cross-disciplinary educational models for preparing mental health professionals who work in integrated or multidisciplinary mental health services. However, traditionally Nurses, Social Workers, Occupational Therapists, Psychologists and Psychiatrists are educated in 'disciplinary silos' at university prior to going out to placements and practice in multi disciplinary mental health settings. This paper presents both a summary of an Australian Learning and Teaching funded project: Developing Cross-Disciplinary Leadership Capacity for Enhancing the Professional Education of Multidisciplinary Mental Health Practitioners, and data from a series of workshops involving a range of mental health educators, mental health practitioners and industry stakeholders. A series of three workshops (learning circles) were conducted

between the main stakeholders from two Universities including members of the Mental Health Workforce, Mental Health Planners, field placement officer, field supervisors, and Deans, Heads of School and Program Convenors. More than 50 stakeholders attended the series of workshops. It was clear that there is a gap in knowledge about the current National Mental Health Standards while there was general acknowledgement of unmet needs for students beginning a multi-disciplinary mental health placement. Furthermore, while there is a current lack of cross-disciplinary educational preparation, enthusiasm for, and interest in, cross-disciplinary education was expressed. There is acknowledgement and support for cross-disciplinary pre-professional education. Efforts however, are limited at universities for models of cross-disciplinary education. There is a need for strong leadership at the discipline and faculty levels to create both a climate for cross disciplinary education and to offer practical and tangible support for such initiatives.

Keywords: *education, multidisciplinary mental health services, cross-disciplinary education*

Psychology students are learning coaching psychology by doing coaching psychology

SPATEN, O.M. (Aalborg University)

The research was intended to investigate our main hypothesis that our students coaching competences grew significantly during training. Furthermore, we had the idea that the students' self-esteem and more general clinical/counselling skills would benefit from the intense coaching psychology training. Two rating scales were administered: Students' coaching competences and social and emotional skills were measured pre-, midterm and end course. In the University program the students concurrently followed cognitive-behavioural therapy courses and cognitive coaching modules. Spanning 1.5 academic years (16 full days) the coaching modules include 104 hours of lectures and action-reflection-workshops. The students coaching competence skills grew from pre-program (Sept 07) to end-program (Nov 08) assessment. A Friedman test found a significant

difference (chi square (2) = 6.0, $p < .05$). The social and emotional skills test showed that students' social and emotional skills also grew significantly from pre- (Sept 07) to end course (Nov 08). A significant difference was found (chi square (2) = 8.19, $p < .05$). We interpret the results as performance enhancement within a non-clinical population. Consequently we propose that coaching should be included in future psychology student's graduate training. In September 2009 the coaching psychology program was launched for the third time. We assume that the coaching program has been an overall rewarding introduction to cognitive behavioural approaches. The program allowed a combination of traditional lectures with "action-reflection-learning" workshops, during which students train cognitive behavioural techniques in their own pace. The findings from this psychology graduate program with an integrated module of coaching psychology show potential and usefulness of cognitive behavioural techniques applied in the cognitive coaching modules. But future measurement tools should include tailor-made scales and techniques for monitoring the learning process. Furthermore, future research with more participants and a control group is needed.

Keywords: *students, coaching, training, self-esteem, counselling skills*

Psychometric test use in Botswana schools: Developing a consumer-oriented framework

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The study constructed the structure and content of a psychometric framework for use of tests in Botswana primary and secondary schools. Psychometric test services are an integral part of student education and development in school settings. The ways such services are delivered within specific school systems must be responsive to the needs of the host education system and its stakeholders. In the absence of an existing framework for delivering such services, a framework for their delivery must be developed. Two-thousand and ninety-nine

educationists, parents ($n=162$) and children ($n=382$) participated. Educationists completed a series of focus group discussions, which generated data for concept mapping analysis. They also completed a survey on perceived importance of psychometric test practices within Botswana schools. The students and parents or guardians completed a survey on developmentally appropriate considerations for the use of tests in schools, including preferences for accessing the tests, domains for assessment and use to which test results could be put. Data were analyzed using descriptive statistics, Multidimensional Scaling and Hierarchical Cluster Analysis. Participants' data suggested a psychometric framework spanning the following clusters: guidance and counseling, learning readiness, personal development, societal influence and socialization. Students across developmental stages preferred to access psychometric services through their class teachers and counselors. Parents perceived a role for the school administration in supporting student access to psychometric tests. A consensus psychometric framework is possible from appropriate consultation with educationists, students and parents. Building into the design of the framework student and parent preferences enhances the targeting of the framework, making it likely that it will be used by students and parents.

Keywords: *Botswana schools, psychometric tests, development, education system*

Psychopathic-like traits and aggression in high school loner and non loner delinquent/non delinquents

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According to Hare (2006) psychopathy has been described as the single most important clinical construct in the criminal justice system and as what may be the most important forensic concept of the early 21st century. Is this a viable construct in children and adolescents in non forensic contexts, however? The aims of this paper are to (i) briefly examine the issues surrounding this question; (ii) describe the

development of instrumentation for use in non forensic settings (e.g., schools, behaviour units); and (iii) determine levels of psychopathic-like traits and forms of aggression of loners and non-loner delinquent/non delinquents. 149 adolescents (73 with official school records of antisocial behaviour and/or behavioural problems and 76 with no official school records for antisocial behaviour) from four high schools and one behaviour unit in the metropolitan area of Perth participated. Three instruments - the Adolescent Loner Scale (ALS), the Adolescent Scale of Aggression (ASA), and the Constellation of Affective and Interpersonal Behaviours Screening Instrument (CAIBSI) - were administered. Based on LS data participants were designated as Loner delinquents (LD), Non-loner delinquents (ND) and Non-loner Non-delinquents (NN). Two separate one way between-groups multivariate analyses of variance (MANOVAs) were conducted. The first explored the effect of Loner-Delinquent Group (LD, ND, ND) on Physical-Proactive, Verbal-Proactive, Verbal-Reactive, and Physical-Reactive aggression. The second examined the effect of Loner-Delinquent Group on the psychopathic like traits (Narcissistic-Manipulative, Callous-Unemotional, Narcissistic-Egotistical, Thrill-Seeking, Impulsivity). Multivariate main effects were evident and these were explored using Univariate F values with Bonferroni-adjusted α levels to control for inflated Type 1 errors. Reliable instruments developed in Australia show loner status has important implications pertaining to psychopathic like traits and aggression. This research further enhances our understanding about loners and has important implications for interventions used in non forensic settings such as schools and behaviour units.

Keywords: *psychopathy, forensic contexts, loners, delinquents, aggression*

Psychosocial and economic influences on health risk behavior: A cross national comparison of older men and women in Australia and South Korea

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Men drink more alcohol than women in all countries, but the male to female (M:F) ratio for drinking varies markedly across countries. Cross-national gender differences in drinking behavior are related to role expectations for women; M:F ratios for drinking and heavy drinking are higher in countries where gender roles are more traditional. Economic development and gender equality are however typically confounded in these studies and most use samples aged <65 years. We aim 1) to examine gender differences in alcohol consumption among middle aged and older adults and 2) to distinguish between economic and psychosocial drivers of women's risk behavior by comparing alcohol consumption in Australia with South Korea, which has similar per capita GDP but where traditional gender roles prevail. We used data from large nationally representative samples of adults aged 45-105 years (mean age = 61 years) in Australia ($n = 5381$) and South Korea ($n = 9870$) to examine drinking patterns for men and women. Multinomial logistic regression examined key socio-demographic associates of risky drinking (>14 standard drinks/week) in these groups. M:F ratios for current drinking were 1.15:1 in Australia, and 3.84:1 in Korea. Rates of risky drinking were similar for males (26.7% in Australia vs. 29.1% in Korea) but not for females (8.5% vs. 1.5%). Average weekly consumption was higher for males in Korea (9.8 drinks/week in Australia vs. 12.9 in Korea) but higher for females in Australia (4.0 drinks/week in Australia vs. 1.0 in Korea). Marital status was associated with drinking only in Korean women; risky drinkers were more likely to be without a partner. Non-drinking was the norm among Korean women (83% abstainers) but non-drinkers were more likely to be married. The M:F ratios for current drinking and risky drinking were much higher in Korea than in Australia; this is consistent with international data on gender empowerment in these countries but not with economic indicators. Being without a marital partner may free older Korean women from some of the social expectations that otherwise constrain their drinking behavior. We conclude that gender-related social pressures may be more important than economic factors in influencing older women's risk behavior.

Keywords: *drinking behaviours, risk taking, gender differences, cross-cultural, gender roles*

Public perceptions of energy choices: The influence of beliefs about climate change and the environment

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Past research has documented high levels of public concern for risks relating to nuclear power, with environmental concern being associated with higher levels of opposition to nuclear energy. However recent UK energy policy, and other debates worldwide, has led to a repositioning of nuclear power as a 'low carbon' electricity source with potential benefits for mitigating climate change. Whilst many previous studies have examined perceptions of climate change and nuclear energy separately, this study explores the relationships between the two as well as with perceptions of other energy sources. More specifically, the study aims to examine (1) the associations between perceptions of climate change and evaluations of different energy sources, in particular nuclear power; (2) whether general environmental concern underlies these associations; and (3) participants' agreement with the idea that nuclear power may help to mitigate climate change and how this relates to general environmental concern and concern about climate change. A nationally representative quota sample of 1,491 individuals aged 15 years and over was used. Respondents were interviewed in their own homes in 257 sampling points across England, Wales, and Scotland. Respondents evaluated renewable energy sources most positively, followed by fossil fuels, and evaluated nuclear power most negatively. Whilst people tended to agree on evaluations of renewables and fossil fuels, there was much more variation in evaluations of nuclear power, reflecting the controversial nature of the technology. General environmental concern and concern about climate change were negatively associated with nuclear power perceptions and positively to renewable perceptions. Only a minority of people considered nuclear power to be a method for mitigating climate change, whilst people who thought that nuclear power can help to prevent climate change were those who were least concerned about the environment and climate change. Those who are

most concerned about climate change also reflect the philosophy of traditional environmentalist movements in supporting renewables and opposing nuclear power, showing that any public discussion which simply presents nuclear power as a solution to climate change, without an examination of wider alternative solutions, may be unduly restrictive for many. Framing nuclear power solely within the context of climate change may also result in misconceptions and possibly further scepticism and mistrust regarding the motives for the further development of nuclear power.

Keywords: *public perceptions, energy choices, climate change, environment, nuclear power*

Public uncertainty and scepticism about climate change

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While there has emerged a scientific consensus about the reality of human-caused climate change, the media often emphasises disagreement and debate surrounding the issue due, for example, to journalistic norms to present a 'balanced view'. As an issue, climate change also poses many challenges to communicators due to its complexity, intangibility, and the implicit threat it poses to modern, energy-intensive lifestyles. These unique characteristics may - at least in part - explain why we see low levels of public engagement - that is personal involvement at cognitive, emotional and behavioural levels - in the issue. We present results here of an investigation into the roles of uncertainty and scepticism as a barrier to engagement. This talk will present the latest findings from mixed-method research on public perceptions of climate change in the UK. Findings from semi-structured interviews ($N = 24$) and from two major UK surveys conducted in 2003 ($N = 589$) and 2008 ($N = 551$) will be presented. We will describe how and why scepticism is more prevent amongst different groups (e.g., age groups, political and environmental values), and why - despite the growing scientific consensus about anthropogenic climate change -

scepticism actually appears to be increasing amongst UK and US publics. We expose the prevalence and dimensions of uncertainty and scepticism about climate change, identify what influences these attitudes, and highlight the links between uncertainty/scepticism and behaviour. The presentation will also discuss what research in this field can tell us about how better to communicate climate change and engage the public with this complex and uncertain issue.

Keywords: *climate change, scepticism*

Putting the pieces together - exploring the way forward in risk assessment of arson offenders

DOLEY, R. (Bond University)

Deliberate firesetting remains a significant concern to our community with devastating effects recorded from fires annually. In the wake of the Victorian bushfires experienced in 2009 efforts to better manage this national concern have been mobilised at policy, practitioner and operational levels. This paper will present the results of a preliminary review into current best practice for risk assessment and management of arson offenders. Issues pertaining to treatment goals will also be canvassed. Findings from empirically based research in Australia comparing serial, one-time and non-arson offenders across a range of offence features and personal characteristics will be referred to. In Australia, currently there is no consistent approach to the assessment and intervention of either juvenile or adult arsonists. Reference to advances in the international arena will be made and the applicability of the lessons learnt overseas to the domestic context will be examined. A proposed model for best practice risk assessment and management for this population will be presented based on the evidence available currently.

Keywords: *arson offenders, risk assessment, treatment*

Quality of life psychological assessment: Teachers as resilient guides for adolescents in Buenos Aires public high schools

MIKULIC, I. (University of Buenos Aires), LABANDAL, L. (University of Buenos Aires)

School desertion is the result of a combination of internal and external factors. The causes of school desertion are multiple but in all cases create the conditions of failure of social integration, as it reduces significant chances of personal realization. The present study shows the importance of evaluating quality of life of adolescents undergoing “ecological transition” (Bronfenbrenner, 1979) from primary to secondary in order to understand this phenomena. As in Argentinean public schools adolescents tend not to continue their studies it is crucial to invest in research on this issue. Following a descriptive design, 500 adolescents participated in answering five inventories specially designed for this research. Ages ranged from 13 to 15 years, consisting of 250 men and 250 women. 68 teachers of these adolescents also participated. Instruments selected were: PQoLI-Perceived Quality of Life Inventory (Mikulic, 2001); CPI-Coping Response Inventory (Moos, 1993); LISRES-Life Stressors and Social Resources Inventory (Moos, 1994); SIASCA-Structured Interview to Assess Strength in Children and Adolescents (Mikulic, 2001) and SIATP- Structured Interview to Assess Teachers Practices (2007). The Perceived Quality of Life Profile shows specific configuration of factors regarding adolescents and environments. Also, importance and satisfaction with life shows differences according to gender. Data obtained suggests that adolescents’ resources and their teachers’ characteristics are resilient sources. Parents, siblings and friends are perceived as an important resource but when importance and satisfaction with life assessed turn out to be a conflict factor. There is only one convergent factor regarding perceived quality of life in adolescents and it is “teachers as resilient guides”. Importance and satisfaction with life correspondence indicates that students assign high importance to teachers’ role and school context. Family and school context and climate represent two significant factors in promoting adolescent resiliency. Specifically, teachers guide

as a medium to develop resiliency and convey hope is an important factor to prevent school desertion.

Keywords: *school desertion, social integration, adolescents, teachers, school climate*

Reckless behaviour in emerging adulthood: A test of a psychosocial model

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Reckless health behaviours such as dangerous driving, unsafe sexual practices, and drug and alcohol use are associated with much of the illness, injury and mortality of young people aged 18-30 years. This study presents a model of emerging adult reckless behaviour incorporating aspects of personality, social influence, emotional influence and cognition. The study investigates multiple predictors of recklessness across a range of health risk behaviours simultaneously, across multiple points in time. The findings presented are from the first of three waves of data collection, consisting of approximately 300 participants sampled from university students, technical college students and the general population. Participants were required to complete an anonymous and confidential questionnaire assessing sensation seeking, impulsivity, peer and parental influence, perceived risks and benefits, emotional influence, as well as their involvement in various forms of reckless behaviour. The questionnaire was available either in a pen and paper format or online. Results demonstrated that each of the predictors of recklessness was significantly correlated with overall reckless behaviour. Hierarchical regression analyses were conducted separately for each of reckless sexual, driving, drug, and alcohol behaviours. The model explained significant variance across each form of reckless health behaviour. Furthermore, these analyses indicated that the significance levels for each of the predictors varied with the type of reckless behaviour under investigation. The findings of this study combined previous predictors of reckless health behaviour into a psychosocial model. By investigating multiple forms of reckless behaviour and multiple

predictors of recklessness simultaneously, the study demonstrated that different factors predict different forms of reckless health behaviour in emerging adulthood. This finding runs counter to claims of “coherent syndromes” of recklessness, and provides greater insight for intervention and prevention strategies targeting the different forms of reckless health behaviour.

Keywords: *reckless health behaviours, predictors, adolescents*

Recovery from serious mental illness: Contributions of traditional clinical factors and psychosocial factors

HOLLOWAY, E. (Swinburne University of Technology)

The aim of the current study is to examine traditional clinical and psychosocial factors (using an attachment framework) potentially involved in the consumer driven notion of recovery from serious mental illness (SMI). SMI is defined as an enduring psychiatric, emotional, or dual diagnosis that has a serious impact on quality of life, functioning ability and health, and includes schizophrenia and other psychoses. The study was a cross-sectional design using a quantitative measure of recovery (The Recovery Assessment Scale). 154 Participants were sourced from Mind Australia (a psychiatric rehabilitation service). Participants completed the questionnaire packs at the program sites. The questionnaire pack contained the scales measuring recovery (using the Recovery Assessment Scale), as well as affect, schemas, coping style, functioning, attachment experiences, severity of illness, number of hospitalisations in the past 12-months, medication adherence, alcohol use, and drug abuse. Relevant information was also collected from their case files and support staff. A hierarchical regression found that an active coping style, low negative sense of self, and low negative affect were the strongest unique predictors of recovery. Structural Equation Modeling shows a series of complex interactions between psychosocial variables and recovery involving affect, attachment anxiety and avoidance, self schemas, active coping and functioning. Of the clinical variables, number of

hospitalisations, medication adherence, and severity of illness had the strongest relationship, but to a lesser extent than the psychosocial variables. Whilst traditional clinical variables appear to play a role, psychosocial variables appear to be vital in the prediction of self-rated recovery from SMI, in particular the presence of an active coping style, low negative affect and negative self schemas. These psychosocial concepts can be understood from an attachment perspective. Implications for the treatment of SMI are also explored.

Keywords: *serious mental illness (SMI), recovery, quality of life, functioning, health*

Reducing adolescent violence: Operationalising the theory of planned behaviour and cognitive behavioural strategies

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Adolescent injury is a significant health concern and can be a result of the adolescents' engagement in violent behaviours. Early adolescents report injuries resulting from getting into fights involving the use of weapons. Psychological theory has been used to explain adolescent violent behaviour however there is limited research about how psychological theory is actually operationalised in the design of adolescent risk-taking harm minimisation programs. The aim of this presentation is to outline how Cognitive Behavioural strategies and the Theory of Planned Behaviour (TPB) were operationalised in the design of a school-based program to reduce adolescent risk-taking behaviour including violence. Secondly, it aims to provide detail about the effectiveness of the program in reducing adolescent violence and violent-related injuries six months following completion of the program. The program, Skills for Preventing Injury in Youth (SPIY) was evaluated with 198 participating students and 137 control students (13-14 year olds). SPIY is a curriculum-integrated program delivered by teachers designed to reduce adolescent injury. Students reported on their engagement in fights,

use of weapons in fights, threats to hurt someone and deliberately hurting someone as well as their experience of injury from violence. The theories were operationalised into the SPIY program and the program implemented. Results showed a significant difference between the intervention and control group from baseline to six month follow-up in some violent behaviours and violence-related injuries. The program thus demonstrated potential in reduce early adolescents' violence risk behaviours and associated harm. The use of psychological theories to design the program and evaluation provides a step beyond understanding violent behaviour to an important area, that of behaviour change.

Keywords: *violence, adolescents, theory of planned behaviour, cognitive behavioural therapy, risk taking*

Reducing musculoskeletal discomfort in computer users: Evaluation of an inexpensive intervention

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Musculoskeletal discomfort and injury is a costly problem for many organisations today. Prolonged computer use has long been associated with increased risk of musculoskeletal discomfort/injury attributed to various biomechanical and psychological factors and work characteristics. Many interventions have been tried: task redesign (rest breaks, micro-breaks, job rotation), workspace redesign (tools, furniture, layout), warning/reminder signs or devices, training in safer techniques, safety policies and management strategies aimed at compliance. However, scientific evaluations of effectiveness are scarce and many are poorly done, e.g. with several interventions introduced concurrently and/or many potential confounds unidentified or unmeasured, which reduces the ability to draw conclusions. This controlled field experiment aimed to evaluate the Microdesk™, an adjustable, clear, sloping writing surface designed to improve the comfort, safety and productivity of people working simultaneously with a computer and papers by reducing the

need for risky postures. A within-subjects ABAB (double reversal) design was used to control for individual factors and for unmeasured constant external factors. Thirty-two administrative officers whose daily work included > four hours of work using a computer and documents simultaneously participated over four months. Participants used a Microdesk™ during months 2 and 4, but not during months 1 and 3 and completed a questionnaire at each month's end. Pain/discomfort, productivity, fatigue, stress and usability were measured as well as workload and non-work injuries. Microdesk™ use reduced pain/discomfort and fatigue compared to non-use. Productivity increased similarly for half the participants while the remainder indicated no change. Pain, stress and fatigue decreased slightly but systematically across the four conditions suggesting study participation alone increased awareness of posture. These changes could not be attributed to changes in hours worked. All participants found the Microdesk™ easy to use. The Microdesk™ is an effective, easy-to-use intervention to reduce musculoskeletal pain/discomfort, stress and fatigue and increase productivity during prolonged simultaneous use of computers and documents.

Keywords: *musculoskeletal discomfort, injury, prolonged computer use, interventions, microdesk*

Regional diversity of teenagers media culture in Ukraine

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Mass media is an important part of the modern culture, especially during societies' transition to digital era. Media has the potential to create virtual worlds in recipients' mind. As post-virtual reality they become the part of our daily life, which plays a role non-different from natural and social reality. Research of the virtuality is the way to understand the diversity of media culture. Research of social-psychological dimensions of the virtuality is the way to understand the diversity of teenagers and adults media culture in regional aspects for improving media literacy school programs. We suggest five social-psychological dimensions of the virtuality

in media culture: contextual weaving, realistic simulation, interactivity (including parasocial relations), reflexivity, resource ability. 5DV-inquirer was used for all-Ukrainian representative survey ($n=2250$ in 2008, and $n=2000$ in 2009) which covers four traditionally differentiated Ukrainian regions: West, East, South and Center. Data show differences of media culture of the different age cohorts (teenagers and adults). The West region youth spent more time with TV, their media culture had higher levels of contextual weaving, realistic simulation and media interactivity than other regions (especially south). East region youth were more interactive (spent significantly more time with friends: offline and via Internet), had higher level of media resource ability, then in other regions. Adults' media culture was more homogenous through all regions. We proposed experimental school media education course for teenagers with regional specify in three motivational modes: security, interactivity and creativity. Discussion about diversity of motivational impact on media education by social-psychological dimensions of the virtuality is required.

Keywords: *mass media, virtuality, media culture, regional diversity*

Regulatory model for the assessment of individual stress-resistance of professionals in demanding job conditions

LEONOVA, A. (Moscow State University)

The elaboration of adequate psychological instruments for reliable assessment of individual ability to cope with stress and to prevent its negative consequences needs the development of new approaches. In addition to traditional theories of stress-resistance (making the accent on neurodynamics' and genetic predictors), Lazarus' concept of psychological stress and state-trait paradigm can be useful for these purposes (Leonova & Velitchkovsky, 2008). The proposed regulatory model of stress-resistance was constructed on this basic. It includes estimations of anxiety, aggression, depression and exhaustion as stable dispositional traits which provoke different modes of subjective

appraisals of the situation and enhance dissimilar emotional states. The battery of the relevant state-trait measures was used for validation of the model (Spielberger's anxiety, aggression, depression paired scales and tests for chronic/acute fatigue). The data were collected on representative samples of professionals working in extreme and/or demanding job conditions (military personnel, policemen, medical staff, bank officers, etc., in total 1450 ss.). Experts' evaluations and objective indices of work efficiency were used as independent criteria of high/low stress-resistance for each individual case. The results of the logistic regression analysis confirm high diagnostic properties of the model. It allows prediction of breakdowns in work performance as well as deteriorations in physical and mental health (by indices of sickness rate, psychosomatic disorders, lowered workability, burnout symptoms). An integrative score of stress-resistance, calculated upon the data of confirmatory factor analysis, reduces the number of multimodal initial indicators to a single standardized measure with 4 ordered categories (from "extremely low" to "high") that makes a basis for a proper diagnostic solution. Empirical verification of the regulatory model shows its high potential for the assessment of the individual stress-resistance level in field studies. Besides the use in professional selection practice it can be also helpful for compiling stress management programs appropriate to the needs of particular persons.

Keywords: *psychological instruments, psychological stress, stress-resistance, emotional states, mental health*

Relation between work values and organizational commitment

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Literature review indicates that values in general and work values especially are an important

variable for organizational commitment. The aim of the current research was to investigate relation among work value and organizational commitment components. The statistical population consisted of 4600 personnel of one large industrial company. The sample comprised 272 persons selected via simple random method. Participants respond to Furnham work values and organizational commitment. At the onset the questionnaire was factor-analyzed, then relations among these eight factors, with three dimensions and total commitment, were investigated through stepwise regression. Findings of factor analysis indicate that work values consist of eight- components .The regression analysis found that among these factors only job prestige was predicator of identification and organizational commitment. Considering affiliation commitment, two factors of salary (and benefits) and job priestesses are the strongest predicators respectively. Exchange commitment doesn't show any significant relation ($p < 0/05$) with none of eight factors. Considering relation between work values and organizational commitment to increment personnel commitment, efforts to recognize and institutionalize work value can increase organizational commitment. Therefore, one way to increment organizational commitment is to have managers focus on perceptions of employees.

Keywords: *organisational commitment, work values, job prestige, salary, affiliation commitment*

Relationship between psychological predictors and accident involvement of Malaysian drivers

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A broad amount of research has attempted to explain individual and psychological differences in peoples' risky driving behaviors. This study is aimed to develop psychological profiles of Malaysian drivers and also to examine the relationship between psychological profiles and accident involvement. The study used self-reported questionnaire consisting of

psychological variables such as personality, impulsivity, cognitive failure, sensation seeking, driving anger, driving behavior questionnaire and driving attitude and behavior questionnaire. The survey was carried out among 652 Malaysian drivers whom committed accident at least once since passing driving test. The results have revealed the relationship between drivers' psychological variables and risky driving behavior. The results of the logistic regression analysis showed that there are five significant predictors (namely the cognitive failure, impulsivity, driving anger, age and gender of the drivers) found to be contributed towards the high risk behavior and road accident involvement. This study also proposed a model of road accident predictor for Malaysian drivers.

Keywords: *risk taking, driving behaviour, individual differences, psychological profiles, Malaysia*

Relationship of core behavioural features of passive-aggressive personality disorder with the big five personality factors

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Passive-aggressive or negativistic personality disorder is listed in the appendix of the DSM-IV-TR for further study prior to its inclusion with the 'official' Axis II personality disorders. Therefore, the aims of this study were twofold: firstly, to examine the core behavioural features of this disorder using the passive-aggressive personality disorder subscale of the Wisconsin Personality Disorders Inventory-IV (WISPI-IV); and secondly, to examine the relationship between passive-aggressive personality disorder and the Big Five personality factors. As part of a larger study on personality disorders, a non-clinical sample of 289 participants ($M = 26.20$ years, $SD = 9.94$, age range = 18-72 years) completed the WISPI-IV passive-aggressive personality disorder subscale and the NEO Personality Inventory-Revised. Correlational analyses revealed that passive-aggressive personality disorder had a significant positive relationship with Neuroticism and significant negative relationships with Extraversion, Agreeableness and Conscientiousness. Furthermore, a principal

components analysis with Varimax rotation revealed four factors with eigenvalues over one, which together explained 53% of the variance in the WISPI-IV passive-aggressive personality disorder subscale. These factors were labelled Passive Defiance, Passive Resistance of Tasks, Perceived Unreasonable Demands/Criticism and Contempt for Authority. These four factors also displayed significant meaningful relationships with the Big Five personality factors. For instance, Passive Defiance and Contempt for Authority were negatively correlated with Agreeableness and positively correlated with Neuroticism; whereas Passive Resistance of Tasks was negatively correlated with Conscientiousness and positively correlated with Neuroticism. These results demonstrate that passive-aggressive personality disorder is comprised of several distinct behavioural features that can be understood within the Five Factor Model of personality. This has implications regarding the conceptualisation of personality disorders using dimensional trait approaches.

Keywords: *passive-aggressive personality disorder, big five model of personality*

Relationship of spirituality, resilience and post traumatic symptoms of bomb blast affectees

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The aim of the present study was to evaluate the relationship between spirituality and resilience, health status and posttraumatic symptoms among survivors of bomb blast (direct), and compare their responses to those who were exposed to the bomb blasts through TV coverage (indirect). Adults (50 direct; 50 indirect bomb blast experience) matched on Age and Gender were selected using purposive sampling from the city of Lahore, Pakistan. Participants were administered Impact of Event Scale (IES), Religious Orientation Scale (ROS) and Strait Trait Resilience Scale for assessment of post traumatic distress and severity, physical and mental health, and resilience. Results showed a significant relationship between spirituality and resilience, but no relationship between

spirituality and level of trauma reported. Findings suggest significant gender and age differences in experiencing trauma and resilience (and coping strategies), with females reporting more trauma and use of coping as compared to males. Further, older adults report higher religiosity, resilience and use of more coping strategies. In conclusion, spirituality and religiosity are significantly related and used as coping strategies especially in dealing with trauma of bomb blasts in urban Pakistani city. This finding has implications for helping those who have gone through recurrent experiences within the major cities of Pakistan.

Keywords: *spirituality, resilience, post traumatic symptoms, bomb blast affectees*

Research about the PTSD of teachers and students after earthquake: A report from DuJiangyan, Sichuan, China

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(Shanghai Normal University)

The aims of the present study were to (1) research and analyze the levels of post traumatic stress disorder (PTSD) of teachers and students after the Wenchuan earthquake, (2) to analyze and compare the levels of PTSD of different kinds of people (including students, teachers, and school administrative personnel), and (3) to analyze and compare the differences of PTSD of school staff among different schools. PTSD-SS (Liu, 1998): the PTSD-SS consisted of 24 items. The reliability coefficients were 0.9207 for internal consistence (Cronbach α), 0.9539 for split-half, and 0.8677 for test-retest. The correlations between PTSD-SS and SAS, and YSR were 0.2064, 0.3536. Participants were 334 teachers and students from DuJiangyan, a section affected by the Wenchuan earthquake (among which teachers were 95, school administrative personnel 94, middle school students 145). It was found that 1.54.19% teachers and students had PTSD symptoms of different degrees, and 33% participants were intermediate or serious. The level of PTSD of middle school students was significantly higher than the teachers and school administrative personnel ($p < 0.01$) and the level of PTSD of teachers was significantly higher than the school

administrative personnel ($p < 0.01$). The level of PTSD of teachers from the most serious school was significantly higher than other schools. The dimensions of PTSD were: re-experiencing, 2.90; avoidance symptom, 2.6; and arousal, 3.05. Therefore, the earthquake of 8.0 scales significantly affected teachers and students, where different kinds of people showed obviously different reactions to the earthquake and the level of PTSD of the victims was influenced by the seriousness of the earthquake.

Keywords: *post-traumatic stress disorder, schools*

Researching service effectiveness: The case of services for survivors of torture and trauma

MCFARLANE, C. (Victorian Foundation for Survivors of Torture)

This paper aims to outline methodological issues associated with researching the effectiveness of services for survivors of torture and trauma. Only a handful of studies have examined the effectiveness of established services for survivors of torture and trauma and the findings have been equivocal. In reviewing the torture and trauma literature, common issues relating to both the evidence based practice movement and researching rehabilitation services are raised. In order to examine these issues further, a description of direct services delivered is outlined and research being conducted to determine their effectiveness presented. The paper draws on current research in which outcome indicators for clients using the service have been developed. Qualitative research with key stakeholders has been conducted in order to identify and gain agreement about outcome indicators for children, youth, families and adults seen by the service. Results from qualitative interviews reveal the complexity of presenting needs and outcomes for clients associated with the service. Key outcome indicators are presented and their relationship to the delivery of direct services articulated. The development of these outcome indicators informs the development of a tailor-made assessment tool that aims to assist in the evaluation the effectiveness of the service. This paper highlights

some of the issues that arise when researching complex interventions with vulnerable populations. It raises questions and highlights issues about how to best evaluate the effectiveness of established services for survivors of torture and trauma.

Keywords: *torture, trauma, survivors, service effectiveness*

Resilience and organizational socialization: A cross-cultural study

CARVALHO, V. (UNIFAL), BORGES, L. (UFMG), VIKAN, A. (NTNU), HJEMDAL, O. (NTNU)

The aim of the present study was to analyze the relationship between resilience and organizational socialization among newcomers in two different job cultures, namely Brazil and Norway. The sample ($N=135$) was composed of Brazilian ($N=72$) and Norwegian ($N=63$) professors and technical-administrative employees at public universities. The data collection instruments used were the Organizational Socialization Inventory (OSI), the Resilience Scale for Adults (RSA) and a sociodemographic form. Hierarchical regression analyses were carried out, the first ones involving all participants ($N=135$), to observe the predictive power of resilience factors in relation to organizational socialization factors, beyond the effects of nationality and occupation. The other hierarchical regression analyses were conducted separately for the Brazilian ($N=72$) and Norwegian newcomers ($N=63$), to compare the predictive power of resilience in relation to organizational socialization between newcomers from the two cultures. Results showed that overall, after controlling for nationality and occupation, resilience factors added a significant incremental prediction to all socialization factors. The predictive contribution from five resilience factors (Perception of Self, Planned Future, Structured Style, Familiar Cohesion and Social Resources) was also noteworthy. Higher perception of self was associated with higher access to information. The planned future predicted various relevant proximal outcomes of organizational socialization. Individuals with a structured style tended to know more about organizational language and tradition, while

those with higher familiar cohesion reported both less access to information and less knowledge about organizational language and tradition. Contrary to familiar cohesion, social resources impacted positively on socialization outcomes, predicting higher access to information, integration to people, professional qualification, and knowledge about organizational objectives, values, language and tradition. Nationality and occupation also played a meaningful role in predicting the socialization scores. Comparing the predictive power of resilience in relation to organizational socialization between newcomers in both cultures it was noted that it is higher among Brazilians than Norwegians. The present study extends current understanding about newcomer adaptation by illustrating the relevance of resilience factors to the proximal outcomes of organizational socialization in Brazil and Norway. More empirical observations are needed to determine the extent to which the present findings may be generalized to different cultures.

Keywords: *resilience, organizational socialization, job cultures*

Resilience: Its nature, assessment and manifestations

KREITLER, S. (Tel Aviv University)

To predict the severity of chemotherapy side effects and extent of personal growth in a sample of cancer patients diagnosed with breast cancer or colorectal cancer. A further goal was to provide additional validation for the theoretical approach of cognitive orientation which enables identifying the cognitive-motivational processes underlying manifest behaviors. The participants were 150 cancer patients (breast cancer or colorectal cancer) undergoing chemotherapy for at least three months. They were administered the Kreitler cognitive orientation questionnaire of resilience (assessing 31 themes in the form of statements referring to four belief types), a questionnaire about personal growth (based on the Jones and Crandall Short Index of Self-Actualization) and the Memorial Symptom Assessment Scale. Regression analyses revealed that the cognitive

orientation scores of beliefs predicted significantly the degree of side effect severity in terms of the physical and the psychological symptoms, as well as the extent of personal growth. The beliefs with the largest contribution to the prediction were goal beliefs, referring to themes expressing the relations between the self and reality (e.g., low self pity, low occupation with justice, strong belief in potential possibilities). The results are similar to those obtained in other studies with the cognitive orientation of resilience in Crohn's patients, in individuals after car accidents, and in teenagers living under difficult family conditions. Resilience is a personality disposition that is manifested in weaker adverse symptoms and in stronger positive behaviors. It has deep motivational roots and may be predicted in the framework of a theoretical approach which allows also for promotion by means of targeted and systematic intervention.

Keywords: *chemotherapy, side effects, personal growth, cancer, resilience*

Risky health and driving behaviours: Factors influencing perceptions of risk

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Injury is responsible for almost 8,000 deaths and over 400,000 hospitalisations in Australia every year. It has been estimated that approximately \$1.3 trillion of potential health gains can be made through reducing injuries resulting from intentional and unintentional behaviours. Risky behaviours such as speeding, drink driving, heavy drinking and water related activities have been identified as major contributors to injuries recorded in both Australia and globally. While research has established factors that show associations with injury prevalence such as gender and age it is less clear how risky health-related behaviours are perceived by the general public. The purpose of the current work is to better understand risk perceptions for 15 risky health and driving behaviours by studying the interactions between cognitive, emotional, and personality variables and how these influence perceptions of risk. A minimum of 300

participants will complete an online survey that focuses on risk perceptions for both risky health and driving behaviours. The survey is guided by previous work that successfully modelled the interaction between cognition and emotion and the influence this has on risk perceptions associated with radiation sources (Peters et al. 2004). The current work aims to broaden the model and apply it to risky behaviours. Structural equation modelling will be used to test the hypotheses concerning the likely interplay between the cognitive, emotional and personality variables. A new model of risk perception for health related behaviours that incorporates these elements will be proposed to provide a framework to guide future risk perception research. A clearer understanding of the public's perceptions of risk associated with risky health and driving behaviors will help identify possible barriers to the uptake of injury prevention strategies. Tailoring educational campaigns to focus on issues, known to be used by the receiver in the formation of risk perceptions, will likely enhance the effectiveness of such campaigns. Identifying variables of importance to the public and providing a model of their relative influence is the first step towards this end.

Keywords: *injury, risky behaviours, driving behaviour, risk perception, injury prevention*

Sarah: A systematic case study of change in a young depressed woman receiving process-experiential emotion-focused therapy (PEEFT)

HARTE, M. (La Trobe University)

Process-Experiential Emotion-Focused Therapy (PEEFT), an integrative, evidenced-based, manualised, experiential therapy developed by Les Greenberg, Robert Elliott and Laura Rice in the 1980's, emphasises the quality of the client-therapist relationship and offers techniques to assist clients to deal with emotional experience in the present moment. Research into the effectiveness of experiential treatments has identified them to be effective with depression, anxiety and trauma in adults. Also known as Emotion Focused Therapy (EFT), the American Psychological Association has acknowledged and

listed EFT as an empirically supported treatment for depression. This presentation highlights the case of Sarah who was part of a larger study that investigated in-therapy experiences and treatment effects of four severely depressed young women (20 to 26) counselled with PEEFT. The importance of the working alliance and the therapeutic interventions associated with change were investigated via self-report, interview and appropriate psychometric measures. Sarah, 21, an undergraduate student, resided with her mother and fraternal twin-sister. At the time of her screening-interview Sarah reported she had been depressed and anxious over the past two or three years and had at times been suicidal. Sarah also presented with body image issues, bulimic symptoms, severe facial flushing and Vestibulitis (painful intercourse). Within a participatory inquiry design, the expanded single case design allowed an interpretive approach, to examining client change and its causes. A simple thematic analysis offered a method to provide themes of change from the client's perspective and clinical significance was also determined. By session four Sarah's flushing was no longer evident and after session six her assessed depression had reduced from severe to mild and her bulimic symptoms markedly reduced. At session nine Sarah said "everywhere I go... everyone's been telling me how stunning and beautiful I am." A few weeks after therapy concluded Sarah reported she had experienced painless sex. At her twelve-month follow-up Sarah's measured level of depression was minimal. The working relationship and PEEFT interventions were identified as catalysts for change. The expanded single-case design provided a detailed exploration of the intricate and complex shifts of feeling and content that occurred for Sarah in her PEEFT therapy sessions.

Keywords: *process-experiential emotion-focused therapy (PEEFT), depression, anxiety, trauma, treatment*

School-based group treatment of depression and anxiety for children at risk

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BJAASTAD, J. (The Assessment and Treatment of Anxiety in Children and Adults Study (ATACA))

The aim of the study is to document the effects of a manual-based CBT group treatment ("Friends for life", Barrett et al., 2001) when applied in a school-setting for children identified as at risk for anxiety and depression in Western Norway. In addition, we will examine predictors of treatment effects. The sample is comprised of 24 children who were identified by School Nurses and a Community Psychologist as being at risk for anxiety and/or depression. The children were invited to attend 10-week group treatment using the evidence-based "Friends for life" manual. Anxiety and depressive symptoms were assessed pre-, mid- and post-treatment. Therapeutic alliance was measured after every even-numbered session (2, 4, 6, 8, 10). The strengths and difficulties questionnaire (SDQ) was administered after every odd-numbered session (1, 3, 5, 7, 9) to examine how therapeutic alliance and treatment effects developed during the course of treatment. We plan to use hierarchical multiple regression models to explore study hypotheses that therapeutic alliance and early improvement will predict treatment outcome at post-treatment. Therapeutic alliance and effect at mid-treatment will be included as co-variables when analyzing effects. The development of the therapeutic alliance and self-reported strength and difficulties over the course of treatment will be examined using paired sample t-test analyses. This study will provide critical information about the effectiveness of the "Friends for life" program in a school setting when applied to children identified as at risk for anxiety and depression. In addition, it will provide information about therapeutic alliance and onset of change as possible predictors of treatment outcome.

Keywords: *school-based treatment, depression, anxiety, at risk children*

Screening for dysfunctional personality tendencies in selection assessment

DE FRUYT, F. (Ghent University), WILLIE, B. (Ghent University)

A comprehensive assessment of personality in selection and development assessment should encompass both the bright and the dark side of behavior at work. De Fruyt and colleagues (2009) recently examined the usefulness and validity in selection and development assessment of a screening technique to identify individuals at risk for exhibiting dysfunctional personality tendencies. Ten dysfunctional personality tendencies are defined and individuals are considered at risk when they scored beyond 1.5 SD above the mean on ten different compound traits. These compound traits are aggregates of (reversed) scores on specific facets of the NEO-PI-R (Costa & McCrae, 1992) assumed to identify dysfunctional personality tendencies. All data reported in this first research line were collected concurrently, i.e. personality assessments and the work criteria of interest were collected at the same time (De Fruyt et al., 2009). The current contribution provides new evidence on the validity of the ten compound scales examining prospective studies where personality assessments were done at baseline and the criteria were collected a considerable time thereafter. Besides validity evidence, a proposal is generated to compute compound traits indicative for dysfunctional tendencies from the general framework of the Big Five, rather than relying on a specific measure such as the NEO PI-R.

Keywords: *personality assessment, selection and development assessment, validity, screening, dysfunctional personality tendencies*

Screening mental health risk among school children

ANIFTOS, M. (Inclusive Education Services (R))

Despite the prevalence of mental health problems among Australian school children (8-22%), few access clinical services. Depending on location and nature of symptoms, access to mental health services is reported to range between only 5-35% of children identified with mental health difficulties. In addition to testing the psychometric properties of the Strengths and Difficulties Questionnaire, the current study expands the epidemiological profile of mental health risk among Australian children and

examines the relationship between teacher ratings of children's psychosocial difficulties and patterns of referral of children to mental health services. Such data is particularly relevant at this time when state education policy is being developed which exhorts school staff to recognise and provide support for all students with mental health problems. The sampling frame consisted of all children enrolled in a state government primary school in south-east regional Queensland, Australia. A participation rate of 75% was achieved from the school population of approximately 540 children aged 5-13 ($N=402$). Data were collected from teachers rating the behaviours of approximately 25 students in their class. Statistical analyses confirmed the reliability and validity of the SDQ and extend available Australian norms to include children 6-12 years of age. In line with the 1998 population survey, the current data indicates that approximately 14% of children demonstrate a high risk of mental health problems as indicated by SDQ ratings by teachers. The study of 400 students indicates that of the High Risk-High Impact cases at school, teacher referrals (30%) are almost twice as likely as parent referrals (17%), emphasising the important role of schools in primary mental health care. This presentation emphasises the need for teachers to understand, recognise and respond to mental health needs of students; and for psychologists to value teachers as co-contributors for mental health referral, assessment, and intervention.

Keywords: *mental health problems, screening, school children, referral patterns*

Self efficacy of adolescents and emerging adults from divorced families and married families, with regard to career decision-making, relationship intimacy and leisure time

ISRAELASHVILI, M. (Tel Aviv University), MORADI, E. (Tel Aviv University)

Parents' divorce has a considerable effect on the self-efficacy of the children in acquiring life skills and undertaking responsibilities. As self-efficacy relies on positive feedback, social encouragement, and the observation of one's surroundings, the lack of sufficient parental

support in divorced families might have a significant impact on the self-efficacy of children from divorced families. Interestingly, their level of self-efficacy has been investigated mainly in the context of relationships, but scarcely in the context of other aspects of self-efficacy. The current study explored three aspects of self-efficacy: Career Decision-Making (Betz, Klein & Taylor, 1996), Relationship Intimacy (Mourua & Lopez, 2005) and Leisure Time (Witt & Ellis, 1985). Participants ($n=251$) were adolescents (39%) and emerging adults (61%), 38% male and 62% female, from divorced (38%) or married families (62%). The general hypothesis was that divorce would have a main effect on the three aspects of self-efficacy. Research findings indicate that a main effect was found for divorce on self-efficacy in intimate relationships, but not on the other two aspects of self-efficacy that were measured. In addition, several gender and age main effects were also significant. Performing a discriminant analysis (gender X divorce) yielded one discriminant function, composed of the "caring for others" sub-scale in relationship self-efficacy and the "engagement with others" sub-scale in leisure time self-efficacy. However, significant product-moment correlations were found between all aspects, and sub-scales, that were explored. The current study findings suggest the possibility that the significant impact of divorce upon children's level of self-efficacy in relationships is only just the edge of a - more prominent and diverse - "self-efficacy glacier". These findings have several implications for counseling adolescents and emerging adults of divorced families in their career decision making as well as in managing their future relationships. The presentation will be ended by discussing the study limitations and future studies that are needed.

Keywords: *divorce, self-efficacy, adolescents, career decision-making, leisure time*

Self efficacy of adolescents and emerging adults from divorced families and married families, with regard to career decision-making, relationship intimacy and leisure time

PARR, J. (University of Queensland), KAVANAGH, D. (Institute of Health & Biomedical Innovation, Queensland University of Technology), YOUNG, R.

(Queensland University of Technology), MITCHELL, G. (University of Queensland)

The aim of the present study was to establish whether there was a role for cognitive behaviour therapy (CBT) in assisting individuals to cease long-term benzodiazepine cessation and to trial two self-managed CBT approaches. Firstly, a meta-analysis of current treatment approaches for benzodiazepine cessation was undertaken to establish the effectiveness of CBT. Secondly, participants were recruited to a randomised control trial with the self-managed CBT program delivered to participants via correspondence while maintaining contact with their General Practitioner (GP). Thirdly, the self managed CBT program was made available to participants via the internet in conjunction with regular email support. The meta-analysis identified that providing CBT in addition to General Practitioner-managed gradual withdrawal increased cessation rates when compared with GP alone. Attempts to encourage GPs across Australia to participate in an RCT were unsuccessful, resulting in a decision to deliver the intervention via the internet. Despite extensive marketing, only 32 people registered for the program via the internet and 14 (44%) completed a 6-month follow-up. Of these, 8 (57%) reduced weekly intake by at least half, including 5 (36%) that ceased use. Self managed CBT may have the potential to assist a greater number of individuals to cease benzodiazepine use, although larger scale trials are required utilising the full potential of the internet to assess its potential impact. Marketing remote delivery treatments remains a significant challenge in both postal and internet formats.

Keywords: *cognitive behavioural therapy, benzodiazepine, trial*

Self efficacy: A new target in the treatment of adolescent depression

LOCARNINI, A. (Monash University), MELVIN, G. (Monash University), TONGE, B. (Monash University), DUDLEY, A. (Monash University), GORDON, M. (Monash University), LEVI, M. (Monash University), LOCARNINI, A. (Monash University)

The aim of the current investigation was to test the feasibility of Self-Efficacy Focused Cognitive Behavioural Therapy (SEFCBT) for adolescents with depressive disorders and to demonstrate that SEFCBT improves depressive symptoms as well as self-efficacy. Young people (12-18 years old) who met criteria for depressive disorder were treated for 13 sessions using SEFCBT. A dual clinician model was used to provide treatment to both the adolescent and parents. Multi-method, multi-informant assessments were conducted prior to treatment, immediately post and at a six month follow-up to evaluate the efficacy of the treatment model. Standard cognitive behavioural therapy (CBT) was augmented in accordance with social learning theory. Specific areas of focus in the treatment regime for the young person were realistic self appraisals, mastery exercises, social self-efficacy, and management of rumination. Mechanisms utilized in the development of self-efficacy were direct experience, modeling and social persuasion. The parent sessions focused on communication and creating an awareness of how to foster adolescent self efficacy. Clinical outcomes of this pilot study will be discussed. A need exists to develop treatments that improve outcome for adolescent depression. Self efficacy offers a valid framework to enhance a standardized CBT treatment program of known efficacy. A randomized control trial is required to confirm the findings.

Keywords: *self-Efficacy focused cognitive behavioural therapy (SEFCBT), adolescents, depression, social learning theory*

Self-injury: Help-seeking attitudes and behaviours of Australia adolescents

BERGER, E. (Monash University), HASKING, P. (Monash University)

The aim of this study was to identify what adolescents believe parents, teachers and peers can do to help people who self-injure and to investigate differences in attitudes according to gender, help-seeking behaviour and previous experiences of self-injury. Students aged 12-16 years completed a self-report questionnaire including the question "what do you think parents and teachers could do to help people

who self-injure?” and “what do you think people your age could do to help people who self-injure?” Thematic analysis methods were used to identify themes and categorise responses, which were then analysed by gender, help-seeking and history of exposure to self-injury. General help-seeking and actual help-seeking scales (Rickwood et al., 2002) assess both formal and informal help-seeking for emotional problems. These scales have repeatedly been utilised with Australian youth. Eight broad categories of responses were identified covering possible ways of preventing and helping those who self-injure, including; talking and listening to the person, informing a parent or relative, seeking help from a professional or mental health organisation, inclusion of young people in activities, the importance of friendship, the need to reduce stress caused by school work and bullying, education to identify symptoms of mental illness and emotional distress, the need to reduce stigma of mental illness, and difficulties of preventing self-injury. The adolescents in this study considered family, friends and formal help organisations as paramount to helping those who self-injure. School-based programmes and policies should support healthy family and peer relationships and reduce unhealthy relationships (i.e. bullying). Many students were unsure about what could be done, while others reported the nothing or little could be done to help and the behaviour or person should be ignored. Enhancement of school-based mental health programmes should be provided to all secondary school students, addressing skills that better individual emotional health, promote tolerance and improve help-seeking views of adolescents.

Keywords: *adolescents, self-injury, help-seeking*

Self-reported use of emotional display rules

DADKHAH, A. (University of social welfare and rehabilitation), NOVIN, S. (Leiden University)

Sociocultural differences in children’s use and understanding of emotional display rules have been under-researched. In the present study, 56 Dutch and 56 Iranian children aged 10–11 years took part in a structured interview about their

experiences of using emotional display rules. In comparison with the Dutch children, the Iranian sample was more likely to report having actually used emotional display rules themselves, more likely to identify family audiences for display rules, and less likely to identify peer audiences. In addition, they were more likely than the Dutch children to identify both pro-social and self-protective motives for concealing emotion from family audiences, and less likely to identify self-protective motives for concealing emotion from peers. Results are interpreted in the light of socialization processes involved in the development of emotion regulation.

Keywords: *culture, socialisation, emotions, children, display rules*

Shared values and perceived justice influences how students’ experience their work-environment

SCHÉLE, I. (Umeå University), HEDMAN, L. (Umeå University)

The understanding of university students, especially in programs with clinical practice, isn’t covered by classical educational psychology and will benefit from a work-environment approach. In this study we investigate how shared values (SV - the extent to which students share the values of their organization) and perceived justice (PJ - how just students perceive themselves assessed and treated) influence how students’ experience their psychosocial work-environment (ExpWE). We hypothesize that SV and PJ will positively influence ExpWE. A web-survey was distributed to all (850) Swedish dental students of which 50 percent answered. A path analysis was conducted on the data (Chi-square 62,138; $df = 20$; $p > .000$; Normed Chi-square 3,107; RMSEA .082). SV influences PJ (.56 for men; .43 for women), PJ influences ExpWE (.78 for men; .68 for women). ExpWE in turn influences Student Satisfaction (Sat) (.78 for men; .74 for women) and Perceived Stress (PSS) (-.39 for men; -.52 for women). Tolerance for ambiguity in regard to problem-solving (ToAP) influences PSS slightly for women (.15) and significantly more for men (.35). Students who share the values of their organization seem more inclined to interpret actions and decisions

from staff as just. ExpWE seems to be more favorably assessed by students who perceive their organization as just. Not surprisingly, ExpWE influences Sat and PSS. That ExpWE, which influences PSS, is influenced by SV and PJ, seems to be in analogy with recent results which suggest that SV and PJ influence the risk for burn-out. That ToAP influences PSS significantly more for men is in analogy with findings from our initial interview-study, where results indicated that male students were more concerned with ambiguous rules and guidelines than were their female fellow students. The influence of SV and PJ on ExpWE should be included in future studies of ExpWE and PSS, as should ToAP.

Keywords: *university students, shared values, perceived justice, psychosocial work-environment*

Signatures of creativity: The interaction of personality and work situation

BLEDOW, R. (University of Giessen), ROSING, K. (University of Giessen), FRESE, M. (National University of Singapore)

We apply Mischel and Shoda's (1995) concept of "behavioral signatures" to creativity at work and argue that creativity emerges from the interaction of personality and work situation. As a consequence, individuals are characterized by distinct patterns of creativity across different work situations. These patterns are termed signatures of creativity. In departing from an idiosyncratic approach as proposed by Mischel and Shoda (1995), we argue that broad individual differences in personality functioning called action versus state orientation (Diefendorff, Hall, Lord, & Streat, 2000) lead to systematic individual differences in signatures of creativity. We used an experience sampling study with 102 employees holding professional jobs to test hypotheses on behavioral signatures. Participants filled out short surveys each morning and each evening during a one week period about characteristics of work situations and their level of daily creativity. Hypotheses were tested with cross-level moderation analyses in hierarchical linear modeling. The study provided support for the hypothesis that

signatures of creativity departed depended on individual differences in action versus state orientation. More specifically, we found that action-oriented individuals were creative if self-efficacy was high and the work situation was characterized by high demands and low structure. In contrast, state-oriented individuals were creative if demands were low, if the work situation was well structured, and if they received social support. The study holds implications for employees and supervisors on how to select and shape work situations to facilitate creativity. Results warn against simplistic one-best-way approaches to stimulate creativity as individual differences in personality functioning need to be taken into account.

Keywords: *creativity, personality, work situation, behavioral signatures, self-efficacy*

Situation awareness, information use, and uncertainty. It's not what you have, it's what you do with it...

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The aim of the present study was to map the relationship between situation awareness (SA - the building up of an awareness of the situation you are in and using that awareness to drive action) and any bias toward accepting or rejecting available information. This model of SA is based on the notion that we may hold both true and false information about our situation and we must select which information to use to build SA. Examining how "bias" shifts under uncertain conditions when SA is lost may give insights into human information processing in real-world situations that may underpin costly, and potentially fatal, mistakes such as Friendly Fire in military situations and human error more generally. A simple abstract category-learning task was used to assess the effect of uncertain feedback (some conditions contained a level of false feedback) on SA of a category present in the display. Participants had to learn a target

category by stating (T/F) whether they believed a category was present on a particular trial, and then using the feedback provided to learn the category. Signal detection theory was used to derive two measures: A' A measure of sensitivity to true vs. false information = SA, and B'' A measure of bias to accepting or rejecting information under uncertainty. The category was changed half-way through (all feedback then correct) to force a loss of SA. A second experiment used the same basic paradigm but was based around a real-world category-learning task. There was a relationship between SA and bias. In the control condition (true feedback) there was a negative correlation between SA and bias. As SA improved participants became more 'lax' in their use of information – they were increasingly likely to believe that a category was present. As the level of uncertainty in the information increased (more false feedback) the negative correlation was maintained but the bias became far more 'strict' with participants inclined to say that there was no target category present in the display. The pattern of results was similar in both abstract and real-world tasks. There appears to be a strong relationship between SA and bias. The nature of this relationship depends on the level of uncertainty in the task. As SA improves participants appear more likely to accept information as true. As uncertainty increases, participants are less likely to accept information. These data have implication for decision making in real-world situations. Work is ongoing to link changes in bias to underlying brain activity using EEG recording.

Keywords: *situation awareness, information use, bias*

Social influence in stock markets

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Theories of herding suggest that individuals are sensitive to the actions of other people which, in the financial world, can lead to stock market bubbles and bank-runs. However, theories of herding neglect important psychological factors involved in this socially-derived influence. The

aim of the present research is to better understand herding by applying theories of social influence, focusing on systematic and heuristic information processing. In a series of experiments a multi-trial approach in which participants made predictions of stock prices was used. On each trial they received information about the current stock price and the predictions of the future stock price made by fictitious participants, forming a herd. In the first experiment the size of the herd (majority vs. minority) and the accuracy in its predictions (accurate vs. random) was varied. In the second and third experiment participants in addition received a focus manipulation, requesting them to focus on either the accuracy in the herds' predictions or the consistency within the herd. In a fourth experiment, the accuracy of the herds' predictions was held constant, but the validity in the current stock price (valid vs. invalid) and the inoculation (present vs. not present) varied across conditions. It was found that a majority herd was influential irrespective of the level of accuracy in its predictions. A minority herd was influential only when its predictions were accurate and when the participants were requested to focus their attention on the accuracy of the herds' predictions. Augmenting the validity of the price information had the same effect. In prediction tasks based on uncertain information, people use heuristic processing more extensively than has been assumed in previous social influence research. A majority herd seems to be influential due to the use of a consensus heuristic. However, no support for Moscovici's (1976) notion that minority influence is associated with systematic processing was found. Instead, the results suggest the use of a "minority heuristic", implying a tendency to follow the price instead of a minority.

Keywords: *social influence, stock market, herding, information processing*

Social networking as a new organizational tool: determinants of time spent on the facebook

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Today, massive changes in the information technology enabled Social network sites (SNS's) to integrate in our daily life more actively. SNS's such as Facebook, MySpace, Bebo and LinkedIn have become enormously popular and widely used for interpersonal communication. In the business arena, as a result of competitive structure of the markets, social networking sites have emerged as a new marketing channel for the firms. To be able to gain competitive advantage and find cost effective solutions to reach customers, marketers have become more interested in learning about, organizing and facilitating online communities. The purpose of the study was to examine the factors that influence time spent on the SNS environment namely Facebook in this case and bring light to Facebook usage types and their frequencies. Data for the study were collected from 1682 Facebook users via electronic questionnaire. A multi item questionnaire was used to measure the dimensions of 'time spend', 'usage types', 'trust', 'privacy concern', 'self-disclosure' and 'personality'. The sample comprised of 894 females and 788 males. The model was tested with path analysis which had a good fit (GFI=0.93; AGFI=0.90; NFI=0.95; TLI=0.94; CFI=0.95, RMSEA=0.07). The results revealed if a person has privacy concern, his willingness to disguise himself increases in virtual society. However the reputation of the virtual society increases the amount of trust one has on the SNS and also decreases his need to disguise, which in turn increases the amount of time spent. However even though the time spend increases people are still using the Facebook with the concern to get socialized instead of doing business. They use Facebook to 'get connected to friends', 'look at profile/pictures', 'send messages', and 'get information about friends', more frequently (M=3.83, M=3.54, M=3.52, M=3.05 respectively). Respondents used Facebook for 'selling', 'marketing', 'buying', 'commercial purposes' and 'advertising' less frequently (M=1.41, M=1.41, M=1.42, M=1.42, M=1.45 respectively). As people are getting more addicted to Facebook they spend considerable amount of time on this virtual network of communication. However from the organizations point of view people are not active in doing business as expected.

Keywords: *social networking sites, Facebook, online communities*

Social relations factors in job search self-efficacy among culturally and linguistically diverse immigrant jobseekers

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The present study aimed to trial a measure of job search self-efficacy and investigate its prediction by several sociocultural factors (host language fluency, cross-ethnic social contact, cross-ethnic social self-efficacy, and social interaction skills), and number of co-ethnic and other ethnic friends, among culturally and linguistically diverse (CALD) immigrants. Participants were 151 non-English-speaking background immigrants (64 men and 86 women) recruited from a job training program in Brisbane. The jobseekers were born in 42 countries, and had a median period of residence in Australia of 1.67 years, with 94.7% holding tertiary or technical qualifications. The participants completed an anonymous questionnaire that included a measure of job search self-efficacy, various sociocultural and friendship variables, and items seeking demographic information. The results showed that a 4-item measure of job search self-efficacy had high internal consistency reliability. Its distribution of scores suggests a general tendency towards being confident about job search, and a good spread across the range of possible scores. As expected, significant bi-variate correlations among all the sociocultural factors and job search self-efficacy were found. However, hierarchical regression analysis showed that the effect of English fluency on job search self-efficacy disappeared when the cross-ethnic interpersonal relations were taken into account. In the final regression model, 41% of the variation in job search self-efficacy was explained; the significant predictors were cross-ethnic social self-efficacy (medium effect size), social interaction skills (medium effect), and having a greater number of co-ethnic friends (small effect). Sociocultural factors, particularly cross-ethnic social self-efficacy and social interaction skills, were found to influence job search self-efficacy among highly qualified, unemployed CALD immigrant jobseekers. Future

research could compare job search self-efficacy and additional psychosocial precursors among local and overseas-born jobseekers. Present findings further suggest that labour market programs for immigrant clients in multi-ethnic societies could focus on enhancing their confidence and skills in social interactions.

Keywords: *job search, self-efficacy, sociocultural factors, immigrants*

Social representations of terrorism: new empirical findings on the role of personal involvement in the shift to radical forms of lay thinking

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This empirical study showed how personal involvement, a major explicative variable of lay thinking, contributes, in the absence of training/practice, to the shift from social representations to more radical forms of lay thinking: nexuses. Its originality consists of providing an analysis of lay thinking about terrorism at the positional level of explanation, a complement to the ideological level used in sociology and political science, and to the intra- and inter-individual levels adopted in psychology. Previous studies have shown that practices are a determinant factor in shaping social representations, and suggest personal involvement as a major explanatory variable. Personal involvement (Flament and Rouquette, 2003) corresponds to an individual's relationship to a social object, such as threat, and is a combination of three dimensions: threat valuation, personal exposure to threat, and perceived capacity to act towards it. This study was completed within the structural approach to the Theory of Social Representations, which enables formal comparisons among representations with the aid of its specific methodologies (Abric, 1994, 2003; Vergès, 1996, 2000). The study compared the lay thinking about terrorism among participants ($N=158$) who had different levels of antiterrorism practice (French safety officers vs. French passengers) and of personal involvement (US vs. French passengers). It was run in the airports of

Marseilles-Provence (France) and Boston-Logan (United States). The social representation of safety officers had a more practical orientation. In contrast, the lay thinking about terrorism of both US and French passengers was normative in nature and displayed a salient affective component. Moreover, for the US passengers, who reported higher scores of personal involvement, "Muslims" was a central element for defining terrorism. In fact, "Muslims" was as essential as "death", "fear" and "attack" to define what terrorism meant for the US passengers. These empirical findings support the hypothesis that in conflict/threat situations heavy personal involvement, acting in the absence of training/specific practices, can shift lay thinking to a more radical, collective and mobilising form: the nexus (rather than social representations). Nexuses (Rouquette, 1994) command profound mobilisation and clear-cut opinions in conflict and threat situations, whether real, implicit or assumed. Their powerful symbolic value is deeply federative because it is anchored in the collective memory of the given groups. Recently, September 11/Islamic terrorism became one of those symbols. Unlike social representations, which enable reasoning about their objects (Moscovici, 1961), nexuses are activated upstream from rationality, and are not the result of a carefully considered and rational analysis. By confirming the major role of personal involvement in the sliding of lay thinking toward radical forms, and the crucial role of training/practice in inhibiting this process, these findings emphasize the necessity of training for the shaping of lay thinking about sensitive objects (terrorism), and for the change in the societal repertoire. Trained individuals are more likely to activate forms of lay thinking (social representations) that are more moderate than the radical ones (nexuses) likely to be collectively activated in the absence of training/practices.

Keywords: *personal involvement, lay thinking, social representations, nexuses, terrorism*

Social support for Coup d'Etat in Africa: In search of an explanation

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Political participation and alternation in office through elections is a major characteristic of contemporary democratic politics. However, in Sub-Saharan Africa, military coup has been, and still is, a common feature of daily politics. Hence, it is not uncommon to witness social support to military intervention in politics. Several theories have attempted to explain this, including economic, cultural, and political factors which account for coup support. This paper examines the underlying causes that propel this support for military intervention in politics. The research involves quantitative analysis and makes extensive use of survey data gathered from several countries in Africa at the individual level. Conclusions reached indicate that although peculiarities of every country show its own impact, social and personal support for military intervention in politics is mainly explained for a rational evaluation of economic expectations and perceptions and cultural differences existing within societies.

Keywords: *politics, military coup, social support, military intervention, cultural diversity*

Socialization or selection? The gender-role self concept of men in female-dominated occupations

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Men in female occupations often have to face the stereotype of being less masculine and more feminine, which may be a hindrance to enter non typical areas of work for young men. Until now little is known if this stereotype holds true. The present study therefore investigates the gender-role self-concept of men in different female-dominated occupations. We evaluate three different hypotheses: Selection processes could take place by which men with a more feminine and less masculine gender-role self-concept are attracted by female-dominated occupations. This would predict that these men have a more feminine gender-role self concepts than men in other occupations. Next we propose a socialization process. This process can point into two different directions: Theoretical considerations point to the assumptions, that the execution of female work will strengthen the

feminine component of the gender-role self-concept. Likewise it could be that men in female occupations re-define their task as masculine and thus reinforce and protect the masculine component. 213 men in female-dominated occupations filled in questionnaires measuring their gender-role self-concept, and redefinition strategies via gender-typical work demands. 279 female colleagues also indicated the task redefinition. To control the selection hypothesis a comparison of the gender-role self-concept of our sample with a representative German sample revealed that the men of our sample scored significantly higher in femininity. The test of the socialization hypothesis revealed that in general, the gender-role self-concept did not correlate with tenure in a female-dominated occupation. However, when redefinition processes were included, we found a positive link between masculinity and tenure for men who defined their work as masculine. No such results were found, when task redefinition of the female colleagues was analyzed. Our data support the selection hypothesis as well as the socialization hypothesis: while the feminine component may underlie a selection process, the masculine component was strengthened by a socialization process via redefinition of work. In general, men's' masculinity can be protected by applying these redefinition processes. This might be important, because masculinity is positively related to psychosocial health.

Keywords: *stereotypes, gender-roles, self-concept, selection processes, socialisation*

Socializing for business in Taiwan: Ganxi development

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Most studies of business Guanxi (the personal ties between individuals as well as an individual's whole network of personal relationships) have focused on outcomes and little attention has been paid to the process of Guanxi development. The aim of this study is to examine a natural context commonly used to foster business Guanxi to identify important components of developing and maintaining relations. We propose an indigenous Chinese psychological framework of Guanxi development

and maintenance as a framework for analysis. We expected to find that socializing is affected not just to obtain the specific business outcomes described in so many studies such as closing a contract or getting a job, but also to enhance real affective bonds, with implications for trust and ethical commitments. We used quota sampling to conduct qualitative interviews with 43 Taiwanese men (aged 20 to 75; $M = 38.5$) with a range of occupations and socioeconomic backgrounds. Interviews were recorded, transcribed, and analyzed using Spradley's (1979) Developmental Research Sequence method. Results supported the framework and indicated the main purpose of socializing was to bond with and test the character of other men by demonstrating a facility with the social etiquette and exchanging mianzi (face) and renqing (favors). The majority expressed that the practice was helpful to their jobs or part of their job description, although nearly half felt compelled to participate. The issue of corruption emerged as an important consideration. Although relationships may be established on behalf of or because of organizations, Guanxi is by nature the relation between individuals; the rules governing Guanxi are the complex norms of interpersonal interaction that come into play every time people interact. However, socializing practices can have an impact that reaches far beyond the affective bonds of individuals. Guanxi networks can become a part of a corporate culture or a whole industry. They may impact the way those organizations conduct business, including corrupt practices. Policy implications are discussed.

Keywords: *Guanxi, development, personal ties, relationships, network*

Spatial and temporal biases in assessments of environmental conditions

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Individuals tend to hold spatial and temporal biases when assessing environmental conditions. Spatial biases refer to comparative optimism in terms of geographic distance, in which proximal environmental conditions are viewed more favourably than distal conditions ("things are

better here than there"). Temporal biases refer to discounting, where present environmental conditions are viewed more favourably than future conditions ("things will get worse"). Gifford et al. (2009) developed the Environmental Futures Scales (EFS) to assess these biases, and found support for spatial optimism and temporal pessimism biases in community samples from 18 countries. The present study investigates these biases in a country not included in the original study. Participants were expected to assess environmental conditions less favourably as spatial distance increases ('My area', 'New Zealand', 'globally'), and assess the future state of the environment less favourably compared to the current state. Going beyond the original study, optimism and future orientation measures were used to assess whether individual differences variables would affect the biases. A total of 108 community respondents (65.7% female; mean age = 27 years, $SD = 10$) completed an online version of the EFS, the Life Orientation Test, the Consideration of Future Consequences Scale, plus socio-demographic questions. A one-way repeated-measures ANOVA examining spatial optimism, with age, gender, optimism and future orientation entered as covariate, showed that assessment of current environmental conditions was significantly affected by the spatial level, $F(1.55, 147.24) = 9.18$, Huynh-Feldt adjusted, $p < .01$. Pairwise comparisons indicated that participants rated current national conditions less favourably than local and global environmental conditions ($p < .001$), and local more favourably than global ($p < .05$). One sample t-tests examining temporal bias showed that participants were pessimistic about the future, rating that local, national and global environmental conditions will get worse, $t(107) = -5.72, -16.15$ and -10.18 , respectively, $p < .001$. Respondents assessed New Zealand environmental conditions less favourably than local and global conditions. Overall, however, spatial optimism and temporal pessimism biases were confirmed in our sample. Construal level theory will be used to discuss the findings and implications for promoting conservation behaviours.

Keywords: *spatial biases, temporal biases, environmental conditions*

Spatial problem solving in real and virtual environments

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The aim of this study was to assess the strategies implemented by people who are trying to solve three-dimensional puzzles in real and virtual environments, with a special interest for the strategies based on people's visuo-spatial capacities. We invited graduate students to solve a spatial task which consisted of assembling blocks of various shapes, sizes, and colors, to form a cube – a variant of the Soma Cube. Performance on this task was shown to be significantly better in those people who scored higher on two tests considered to reflect individual capacities of visuo-spatial imagery (the Minnesota Paper Form Board and the Mental Rotations Test). The analysis of participants' verbal reports as they attempted to solve the puzzle was analyzed and reflected their efforts to visualize the target state and implement adequate strategies. Performance was also shown to depend on the classification of individual blocks according to their perceived complexity. Based on the behavioral data collected in this experiment, we developed a further study in which the same task was executed in a virtual environment. We compared interfaces involving commands based on distinct modalities (keyboard, voice commands, or gestures) or combined modalities (voice + gesture). An assessment of the respective values of these modalities in developing successful strategies is intended to help us build a computerized system of assistance to spatial problem solvers.

Keywords: *spatial problem solving, virtual environment*

Spirituality, job stress, organizational commitment, and job satisfaction among nurses in Tehran

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The study aimed to explore the amount and relationships between nurses' spirituality, job stress, organizational commitment and job satisfaction in Tehran hospitals. A descriptive (regression analysis) design was selected and 379 nurses (307 female and 75 male) working in hospitals in Tehran completed four valid questionnaires. Results indicated that nurses felt low job satisfaction, moderate to extreme organizational commitment, high spirituality (spiritual care) and job stress. The analysis of regression showed that job stress negatively correlates with the other three variables. Moreover spirituality, organizational commitment and job stress play a significant predictors role on nurses' job satisfaction.

Keywords: *nurses, job satisfaction, spirituality, job stress, organisational commitment*

Stochastic change in driver's reaction time with arousal state

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The purpose of this study is to examine how a driver's reaction times (RT) change, in a stochastic manner, with his/her arousal state. In this study, we express reaction time distributions by ex-Gaussian function, which has been known to fit well with RT data. As an index of arousal state, we use eye-opening ratio (EOR), a relative distance between the upper and the lower eyelids at a given moment to that obtained under high arousal state. An experiment was conducted using a driving simulator. Seven students participated. The front view of the simulator showed a running car in front. The participant's task was to keep distance from the front car and stop by hitting the brake pedal as soon as the front car's brake lights turned on. RTs of hitting the brake were measured 300 times for each participant. During the experiment, the participant's left eye was monitored by a digital video camera to compute EOR. For the data analysis, we classified individual RT data into 2 sets according to corresponding EOR values, Low (lower than 85%) and High (higher than 85%). Ex-Gaussian functions fitted quite well with RT distributions

for the Low and the High EOR for all 7 participants. The change in the distributions with EOR values varied individually. For 3 of 7 participants, the mean of the distribution was larger for the Low than for the High EOR, which is reasonable. However, two participants showed little change in the distribution and the other two participants showed higher means for the High EOR. Our use of ex-Gaussian function to fit RT distributions was shown to be quite successful, suggesting that the ex-Gaussian function captures the stochastic nature of RT during driving. The results of using EOR to see the change in RT distributions with EOR are mixed. One possible reason for such an inconsistency is that RT data for the Low EOR were relatively small in size and may not be appropriate samples of parent populations for low arousal states. We are now investigating ways to obtain good samples for low arousal states.

Keywords: *driver's reaction times, stochastic manner, arousal state*

Strategic behavioural advantage: A process theory of creating competitive advantage through strategic human resource management.

CHAMP, M. (Department of Transport and Main Roads)

A review of the Strategic Human Resource Management (SHRM) literature reveals a number of deficiencies in our current level of understanding of the theory and practice of SHRM in organisations, including; a lack of process for developing human resource strategy, lack of theory to explain how and why human resource practice contributes to long term organisational sustainability, a tendency to be overly concerned with Human Resource (HR) practice rather than how or why they work, research designs too narrow in scope, tend not to acknowledge organisational context, and are not behaviourally based. The research paper proposes a theoretical framework to address the deficiencies in the SHRM literature and tests it in a field based setting. Within a public sector organisation of about 5000 employees the research utilises a multi-method, repeated

measures approach in a field based setting, using both qualitative and quantitative data. The research process proposes a theoretical framework, then uses the framework to systematically diagnose organisational performance issues, identify appropriate human resource strategies to address them, and evaluates performance outcomes of the strategies implemented over a three year period. Results suggest the framework effectively provides a foundation upon which a systematic approach to SHRM can contribute to overall organisational performance. However the research also identified a number of internal and external factors that can have profound implications upon the impact of human resource strategy extraneous to current approaches, such as; political considerations, individual personalities, senior managerial decision making processes, organisational culture, and external stakeholder influences that are outside the scope of current theory and practice. Current theory needs to expand to take into consideration such issues, the context of how practices are implemented, and to take into account influences outside of the "logic" of the immediate diagnosis-intervention-outcome process flow. Clearly current SHRM approaches largely fail to take account of organisational reality and until they do, theoretical approaches that look good on paper, will not translate to sustainable organisational performance.

Keywords: *strategic human resource management, organisational sustainability, organisational performance*

Street children and delinquents: A holistic psychological intervention in Brazil

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During August 2009 we accomplished a humanitarian mission in Timon among 848 children from the school "Mãos Dadas" (Hands hold together). We worked with 26 classes of students, from 3 to 18 years old, with 120 parents, 43 teachers and the civil and military police force of Timon. We intended to provoke some behavioral and emotional changes among all participants: motivating children for school

and for a personal and academic/professional life project; getting them out of streets, drugs and delinquent behaviors; improving parents-children relationships and elucidating parents about behavioral modeling for their children; improving first health care and alimentation habits among students' mothers and; changing/improving the relationship between the Police Force and the community. During this presentation we will reveal each step of our psychological intervention with the different groups and discuss the results obtained. A seven session personal and social skills program was administered to each class, plus one session with classes of the same school year together. Two educational parenting skills training session were administered to parents, both at school and during visits to their houses. A two sessions motivational and burnout prevention training course for the 42 teachers of the school. A training course for the Police Forces of Timon regarding their relationship and involvement with the community, their image perceived by the community and the Portuguese model of Proximity Integrated Policing they can adjust and implement. Before and after the intervention program we did psychological assessment through questionnaires of behavioral adjustment as well violence beliefs. After the program we gathered teachers' evaluation regarding our work there and its effects on students and their families. Data gathered shows significant behavioral and emotional changes among students allowing us to consider our personal and social skills program as a successful one. Teachers keep on using the educational and motivational techniques we presented. Holistic intervention in these scenarios is needed to fulfill emotional and psychological needs. A follow-up mission is planned for August 2010.

Keywords: *delinquents, Brazil, training, interventions*

Students' hope, performance expectations, attributions and emotions for school performance

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This study, basing on Weiner's theory of attributions and emotions for achievement

behaviour, and Snyder's hope theory, examined (a) children's (N=322, both gender, 5th and 6th grades) attributions and emotions for their perceived successful and unsuccessful school performance in mathematics and language; (b) the role of children's hope (total, pathways thinking, agency thinking) in the perception of their performance as successful or unsuccessful in the above school subjects, in attributions and emotions for the same performances, and in the impact of attributions on emotions; and (c) the effects of hope in the formation of school performance expectations, and in the impact of attributions and emotions on performance expectations. Teachers rated students' academic performance, while the students completed the rest of the scales (e.g., 'Children's Hope Scale' (for ages 8 to 16), Snyder et al., 1997). The results from MANOVA analyses, and subsequent Anovas and Discriminant Function analyses showed that the children attributed the perceived successful performance mainly to stable and internal factors, and the perceived unsuccessful performance predominately to unstable and personal uncontrollable factors, in both school subjects. Also, students experienced intense positive emotions for successful performance, and moderate negative emotions for unsuccessful performance. Hope influenced the perception of performance as successful or unsuccessful in language and, mainly, in mathematics. Furthermore, higher levels of hope (predominately, pathways thoughts) were related to less perceived unsuccessful performance in language, and more perceived successful performance in language and, particularly, mathematics. Also, the results from a series of hierarchical regression analysis revealed that hope (mostly, agency thinking) positively influenced the formation of attributions (particularly, stability), emotions, and the impact of attributions on emotions (mainly in the perceived unsuccessful performance groups). Yet, in the perceived successful performance groups in both school subjects, high-pathway thinking children expected higher school performance. In contrast, in the perceived unsuccessful performance group in language, low-agency children had low expectations of future performance. Finally, hierarchical regression analyses indicated that hope moderately influenced the impact of attributions (mainly,

locus of causality) and emotions on performance expectations. The findings from the present study suggest that children have certain hope level that influences their causal attributions and emotions for their school performance. We should help children to maximize hopeful thinking.

Keywords: *attribution, achievement behaviour, hope theory, emotions, school performance*

Study of latency childhood depression: Clinical features revealed in the process of psychoanalytic psychotherapy

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Psychotherapy research on childhood depression has proved that psychoanalytic child psychotherapy is an efficacious treatment. However, the clinical features revealed in the process of psychodynamic psychotherapy have rarely been studied. Hence this research intends to explore themes/ features of childhood depression revealed in the process of psychoanalytic psychotherapy and of parent consultation. Four children (aged 9-11) diagnosed as having depression were referred from psychiatric hospitals. The Chinese version of the CDI-Parent Rating and Depression Rating Scale for Children (Chang, 2006) was conducted to ensure that the subjects matched the criteria. The four pairs of parents received 10 sessions each of parent consultation from one clinician whilst their four children received 10 sessions each of psychodynamic psychotherapy from the other clinician. All 80 therapy sessions were recorded, transcribed and coded, and then the quantitative data analysis software Atlas.ti 5.0 was used to code and analyze the psychotherapy session notes. Expert reliability was obtained with the contributions of two other senior child psychotherapists. The analysis of the parent consultation revealed the following themes/ issues: the parents' unresolved problems; parents' lack of function; parents' severe and punitive super-egos; blurred emotional boundaries within the family structure; and a perverted parent-child relationship. The analysis of the child psychotherapy revealed the following themes/ issues: severe and punitive superegos; excessive guilt and inhibitions; inner

deprivation; feelings of helplessness and hopelessness; the need to control; idealization and inferiority; internal aggression and anxiety; confusional internal states; negative object relations representation; and oedipal problems. It is hoped that this study will add to the knowledge of childhood depression and provide the child clinician with a useful reference for further research and the implementation of treatment plans. Three main categories and five features were found in the parent consultation; three categories and fourteen features were found in the child psychotherapy process. The result of this research is consistent with some of the research findings on childhood depression, especially the features of anxiety, guilt, helplessness and hopelessness in the children. It is hoped that this study will add to the knowledge of childhood depression and provide the child clinician with a useful reference for further research and the implementation of treatment plans.

Keywords: *latency, childhood depression, psychoanalytic psychotherapy*

Study of relationship between supporting services and quality of life of people with Multiple Sclerosis who live in Tehran

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The aim of this research is to assess the relationship between supporting services and the quality of MS patient's life. The study utilizes a correlational research design and randomized sampling. The research data were collected through interviews with the patients, a standard 54-instruments questionnaire (MSQOL-54) on MS patients' quality of life and the supporting services questionnaire. Spearman correlation statistical testing procedure was used to verify the relationship between the variables. The results have shown that there is a meaningful relationship between the supporting services and the mental and physical aspects of the patient's quality of life, whereby increasing the level of supporting services improves the social and cognitive functioning of the patients. There

is a meaningful relationship between supporting services and reducing role limitation due to physical and emotional problems, whereby increasing the supporting services decreases the pain and fatigue of the patient. Meaningful relationships were also found between supporting services and increasing emotional well-being and decreasing health distress. Since the present study shows a meaningful relationship between supporting services and the patients' quality of life, it would be beneficial to enhance the level of supporting services in order to improve MS patients' quality of life.

Keywords: *supportive services, multiple sclerosis, quality of life*

Studying reasoning and judgment by tracking information accessing and processing behaviour in complex, dynamic environments

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This research investigated the impact of cognitive traits and biases on human information processing and judgment in complex, dynamic and ambiguous environments. Using the Analysis Simulation Project (ASP) methodology for investigating reasoning and judgment behavior, two studies were carried out. The ASP methodology is a computer administered simulation of complex information environments which records and tracks information access, transfer and utilization as well as other variables of interest. Study 1 ($n=40$) examined the influence of the cognitive trait of "need for closure" on a threat estimate for a visit by a government official to a foreign country. This task is common in the Security and Military Intelligence analysis environments. Study 2 ($n=50$) examined confirmation bias. The experimental scenario was set within the context of investigating a murder as would occur in the work of Policing agencies. The results for study 1 showed that need for closure predicted the level of assessed threat even controlling for the amount of information accessed by participants. Study 2 results were consistent with the general findings on confirmation bias in

that those higher in behaviour consistent with a confirmation bias approach were substantially less likely to choose the most likely suspect as the murderer. The studies taken together illustrate the capability of the ASP methodology to represent complex, dynamic and ambiguous information environments. These studies are the forerunners of a more extensive analysis of complex information environments with a view to better applying the findings of reasoning and judgment research to realistic environments.

Keywords: *information processing, processing behaviour, judgement*

Subjective wellbeing and psychological contract content: The relationship between employee wellbeing and dynamic performance expectations

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Subjective wellbeing is known to influence the quality of an individual's interpersonal relationship. A recent study found subjective wellbeing to also influence the nature of an individual's employment relationship. Specifically, subjective well-being was found to predict a balanced psychological contract type, accounting for almost 40% of variance within a single organisation. This paper presents the findings of this first study, and aims to then examine the generalisability of the finding in a larger sample, across multiple organisations. A sample of 448 participants sourced from 17 organisations representing six industries was employed. Data was collected by means of an online survey measuring the psychological contract and subjective wellbeing. The previous study's findings were confirmed with subjective wellbeing predicting a balanced psychological contract. Results found that subjective wellbeing was uniquely related to a balanced psychological contract type ($\beta = .208, p = .001, sr^2 = .02$) and more specifically to dynamic performance expectations ($\beta = .240, p = .002, sr^2 = .02$). These findings were consistent across organisations and industries, supporting the generalisability of findings. Results were explained within the framework of subjective wellbeing and coping theories, proposing that psychological contract

expectations surrounding the likelihood of change related stressors coupled with dynamic performance enhance employee coping abilities which in turn related to employee wellbeing. These findings hold practical implications for organisations wishing to implement programs that encourage flexible and adaptive behaviour in their employees. Such employee behaviour is desirable for organisations particular during times of change and/or economic downturn.

Keywords: *subjective well-being, interpersonal relationships, psychological contract*

Suicide prevention professional development training for mental health services in rural and remote areas (MHSRRA) Program: A pilot project

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Suicide is not only a devastating tragedy for the individual and their friends and family, but it is also a major public health issue for the community as a whole. Several studies indicate that suicide rates are higher in rural and remote Australia compared with metropolitan settings, especially amongst particular populations. Clinicians providing mental health services in rural and remote Australia are likely to encounter people who demonstrate suicidal ideation or behavior, and are likely to have less access to the resources of their metropolitan counterparts. Under the Australian Government's Mental Health Services in Rural and Remote Areas (MHSRRA) Program, designated allied health professionals are being offered Suicide Prevention Professional Development Training. This training has been developed using evidence-based practices, to inform participants of the assessment and management of people at risk of suicide or serious self harm, and to specifically highlight the issues and concerns relevant to working in rural and remote Australia. Sections of the training are expressly dedicated to engaging three Australian populations that are of higher risk: people of Aboriginal and Torres Strait Islander descent, men, and young people. In recognition of some of the barriers to accessing training for rural and remote clinicians, this training can be completed via long-distance with

a comprehensive workbook that includes pre-reading, and assessment tools; two DVDs that present lectures, roleplays, and vignettes; and an online assessment. The program has been endorsed by the Australian Psychological Society and Australian Association of Social Workers for continuing professional development points for their members, and applications are pending with OT Australia and Australian College of Mental Health Nurses.

Keywords: *suicide, rural and remote Australia, suicide prevention professional development training, allied health professionals*

Supervisees' views of supervisor effectiveness as a result of supervision training

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Training for supervisors of probationary psychologists has become mandatory in several states of Australia. However, little is known about the effectiveness of existing training protocols for influencing supervisors' task performance. In order to address this gap, the current study examined supervisees' perceptions of supervisors who had participated in the Queensland-based Supervisor Training and Accreditation Program (STAP). The key objectives of the study were to determine whether supervisees perceived that their supervisor's performance was enhanced by STAP-training, and to uncover trends in the supervisee experience that could further inform the process of supervisor training. An overview of the 6-year STAP program will be provided. As part of the STAP accreditation process, supervisees of supervisors-in-training were required to submit a pre- and post-STAP *Supervisor Satisfaction Questionnaire*. Of 508 supervisees entered into a database as having completed this questionnaire, 33 were randomly selected to discuss their supervision experiences in more detail via a structured, confidential telephone interview. A trend for supervisees to perceive their supervisor's performance as improving was evident on 50 of the 53 tasks surveyed. The tasks on which supervisees were

most likely to report supervisor improvements were directly relevant to the supervisor's performance under the Supervised Practice program, such as ensuring comprehensive contract, seeking feedback. Sixty percent of supervisees indicated that STAP training was the process that had had the most impact on their supervisor's effective practice. Comparisons between Pathway 1 (Honours plus 2 years supervised practice) and Pathway 2 (post-graduate course) supervisees will also be discussed. STAP appears to have a positive impact on supervisors' task performance in supervision, particularly in relation to SPP-relevant tasks. It may be pertinent to train supervisors to especially attend to different issues, depending on the pathway taken by their supervisee (e.g. responsibilities in supervision for Pathway 1 trainees and the power differential for Pathway 2 trainees). Asking supervisees to share their evaluation of their supervision with their supervisor has a negative impact on the validity and utility of data gathered. The collection of *confidential* supervisee ratings of their supervisor's effectiveness pre- and post-supervision training is recommended.

Keywords: *training, probationary psychologists, supervisors*

Teacher resilience: A review of current literature

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This paper presents a systematic review of literature related to teacher resilience. The review underpins a larger research project that aims to enhance the resilience of early career teachers by embedding evidence-based practice within the pre-service teacher education programs of two Australian universities. One aim of the paper is to identify constructs and consequent research methods to inform the development of a questionnaire for use with pre-service and early career teachers, and guide the nature of strategies implemented in the universities involved. There is concern internationally with the high attrition rates of

early career teachers. Numerous studies have examined factors such as workloads and behavior management difficulties that contribute to teacher stress and burnout. More recently researchers have looked towards teacher resilience as a more positive way of addressing this problem. Definitions of resilience include the ability to "bounce back" after experiencing difficult events. It is the capacity to deal constructively with challenges and the ability to maintain social and emotional well-being in the face of difficult events. A shift in thinking from attrition to resilience offers the potential for more effective interventions to occur. A search of databases such as ERIC and ProQuest revealed over 250 journal articles and conference papers linked to key words such as 'resilience', 'teachers' and 'burn out' published between 2000 and 2009. Papers selected for systematic review are those most relevant to teacher resilience and are summarized according to key criteria such as conceptualizations of resilience, research methods used, key empirical findings, and issues raised. For example, one important issue arising from the literature is the relationship between teacher retention and teacher resilience. The assumption is that if new teachers develop greater resilience, they will be less likely to leave the profession. At the same time, however, there is evidence that some teacher education students consciously plan to teach only for a short time before moving on to achieve other life goals. The paper will provide an overview of strengths and limitations of current research suggest directions for future research and derive implications and recommendations for pre-service teacher education programs

Keywords: *teacher resilience, university, stress, burnout*

Teachers' competence in parent counseling: Evaluation of a training program in in-service and pre-service secondary-school teachers

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Teachers' professional responsibilities are constantly changing in a world where education is an increasingly important resource. Parents demand teachers' advice in how to support their children at home (e.g. Cooper, Lindsay & Nye, 2000; Trautwein & Lüdtke, 2009). Positive effects of a frequent parent-teacher-communication and teachers' counseling activities are well documented (e.g. Lengua & McMahon, 2000; Manz, Fantuzzo & Power, 2004). In line with this, recent conceptions of teacher professionalism include counseling knowledge in what is seen as a core set of teachers' professional competencies (e.g. Baumert & Kunter, 2006), but an explicit training of counseling skills is rarely included in teacher education. We investigated the effects of a training-program designed to enhance teachers' counseling competence in two samples: (1) a sample of in-service secondary school teachers ($N=59$), and (2) a sample of pre-service secondary school teachers ($N=23$). In each sample, a quasi-experimental pretest-posttest-design was used. Based on previous research, teachers' counseling competence was operationalized as a five dimensional construct with the following sub dimensions: personal resources, social co-operation, counseling skills and pedagogical knowledge, solution and process orientation, and coping. The training consisted of a total of four training sessions that lasted for 210 minutes each. The sessions were held weekly. The main topics addressed were communication theory, and self-regulated learning. In both samples, counseling competence was measured by self-ratings and a knowledge test in pre- and posttest. For the self-ratings, participants were asked to rate their counseling competence (e.g. self-reflection, communication-skills) on six-point rating scales. These measures were combined into an over-all measure of perceived counseling competence. Cronbach's α for this measure was .86 in sample 1 and .77 in sample 2. Participants' counseling knowledge was assessed with a four-item declarative knowledge test covering topics addressed in the training. For in-service teachers, positive training effects were found for both outcome measures (perceived counseling competence and declarative knowledge). For pre-service teachers, training effect emerged for knowledge, but not for self-ratings of counseling competence. The results underscore the

importance of training teachers' counseling competence, and indicate that even a relatively short training can substantially improve teachers' counseling competence.

Keywords: *teacher competence, parent counseling, training programs, education, communication strategy*

Teachers' understanding of school connectedness: Implications for the development and implementation of school based injury prevention strategies

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Worldwide, injury is the leading cause of death and disability for young people. Injuries among young people are commonly associated with risk taking behaviour, including violence and transport risks, which often occur in the context of alcohol use. The school environment has been identified as having a significant role in shaping adolescent behaviour. In particular, school connectedness, the degree to which adolescents feel that they belong and are accepted at school, has been shown to be an important protective factor. Strategies for increasing school connectedness may therefore be effective in reducing risk taking and associated injury. Prior to developing connectedness strategies, it is important to understand the perspectives of those in the school regarding the construct and how it is realised in the school context. The aim of this research was to understand teachers' perspectives of school connectedness, the strategies they employ to connect with students, and their perceptions of school connectedness as a strategy for risk taking and injury prevention. In depth interviews of approximately 45 minutes duration were conducted with 13 Health and PE teachers and support staff from two high schools in Southeast Queensland, Australia. Additionally, six focus group workshop discussions were held with 35 Education department employees (5-6 per group), including teachers from 15 Southeast Queensland high schools. Participants were

found to place strong importance on the development of connectedness among students, including those at risk for problem behaviour. Strategies used to promote connectedness included building trust, taking an interest in each student and being available to talk to, and finding something positive for students to succeed at. Teachers identified strategies as being related to decreased risk taking behavior. Teacher training on school connectedness was perceived as an important and useful inclusion in a school based injury prevention program. The established link between increased school connectedness and decreased problem behaviour has implications for school based strategies designed to decrease adolescent risk taking behaviour and associated injury. Targeting school connectedness as a point of intervention, in conjunction with individual attitude and behaviour change programs, may be an effective injury prevention strategy.

Keywords: *injury prevention, risk taking, school connectedness, teachers*

Team learning in command teams

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In case of large incidents and emergencies, multidisciplinary command teams have the mission to coordinate the multidisciplinary cooperation and actions of different services needed, like the fire brigade, the police and disaster medicine. Therefore, they need to develop a shared cognition as the basis for decision-making. The teams are composed ad hoc, and therefore lack a history and have a short life span. According to Van den Bossche, Gijzelaars, Segers and Kirschner (2006) team learning behavior, defined as processes of construction, co-construction and constructive conflict, gives rise to mutually shared cognition, leading to higher team effectiveness. Past research has not been specific about if and how team learning behavior is used in multidisciplinary command teams. With this study we explore the importance of team learning behavior for the team performance of multidisciplinary command teams. In a first pilot we explored the utility of the questionnaires we developed, and whether team learning behavior

is used by the multidisciplinary command team existing of representatives of the police, the fire brigade and disaster medicine. For this pilot we collected data during a realistic exercise these teams do to be prepared for the real work. There was one team, existing of eight team members and there were nine observers. This team had two team meetings. During and after each team meeting, and after finishing the exercise, both the team members and the observers filled out a questionnaire with open ended and closed questions. So there were three measurement moments for each respondent. In addition, we have scheduled a data collection with 24 team exercises, planned on January 19, January 26, February 2, February 9, March 2 and March 9 2010. The aim is to collect data on how team learning behavior is related with the team result, being shared situation awareness and decisions, and with the results of the emergency management as a whole (i.e. number of victims). Again we collect data during realistic exercises of real teams, using multiple methods, and with repeated measures. The pilot showed the team members experienced team learning behavior and they were merely positive about their team decisions. Constructive conflict was the team learning behavior least used. The team members seem to make more use of team learning behavior in the second meeting than in the first. The observers also indicated team learning behavior. They were less optimistic about the team decisions. These findings underline the relevance of this study. The questionnaires had a good utility. Some changes were needed. We improved the instruction of the team members so that they could work faster, and we decided to observe the team results and the results of the emergency management by two different teams of observers. Data collection is ongoing. During the presentation we will present the results of the pilot and the results and implications of the 24 other teams studied.

Keywords: *command teams, multidisciplinary cooperation, decision making, team learning behavior, performance*

Temporal changes in the factors influencing psychological contract formation and development in new recruits

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The psychological contract is a popular framework for understanding contemporary employee-employer relationships. However, its utility as a management tool is potentially limited, largely due to an inadequate understanding of psychological contract formation and development. This paper presents findings from a national longitudinal study aimed at investigating psychological contract content formation in new recruits and the factors that impact development of contract content across the first year of employment. Over 600 Australian employees from seven industry sectors completed an on-line survey within their first month of employment at an organisation. Follow-up surveys were conducted after 6 and 12 months employment. Instruments used included the Psychological Contract Inventory, EASE Socialisation scale, and organisational outcome measures. Results from the first-wave data collection revealed that the type of psychological contract held by employees was significantly predicted by employer fulfillment of obligations, organisation socialisation, role socialisation, and work environment information. Results from the second-wave data collection demonstrated that the primary factors informing psychological contract content and subsequent type had changed. These predictive factors were employer fulfillment of obligations, employee fulfillment of obligations, social accounts, and careerism attitudes. Results from the third and final wave of data collection are pending early 2010 and will also be presented. The primary factors influencing psychological contract formation and development will change across the first year of employment. In particular, the importance of various socialisation factors appears to shift as the employment relationship lengthens in duration. Understanding the temporal factors impacting psychological contract development extends our theoretical knowledge and allows direct application to development of organisational

management policies encouraging quality, long-term employment relationships.

Keywords: *employee-employer relationships, longitudinal study, temporal changes, recruits*

Test construction by means of confirmatory factor models in considering the position effect

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Since confirmatory factor analysis is a method, which emphasize the homogeneity of the items of a measure, the presence of a position effect may cause a failure in test construction by means of this method. The position effect is a method effect that has been observed in various sets of items. It describes the systematic change in responding to items as a consequence of having already responded to other items of the same measure. Usually an increase in the consistency of responding is observed. In order to avoid model misfit, the model of measurement that is basic to confirmatory factor analysis needs to be upgraded appropriately. Such an upgrade can be achieved for the congeneric and essentially tau-equivalent models of measurement as basis of confirmatory factor analysis. An additional latent variable for representing the position effect can be included in each one of these models of measurement. The loadings on this latent variable needs to be fixed according to the expected position effect. Confirmatory factor models including upgraded models of measurement were applied to two data sets together with conventional models. The items of two reasoning measures were used for collecting the data. The results of investigating the data revealed that the model fit can be considerably improved by integrating a representation of the position effect into the model of measurement. According to the results of the study the position effect can be an actual source of model misfit in test construction. Since the position effect is a disturbance but not a danger to the validity of a measure, the consideration of the position effect can avoid the rejection of a possible valid measure in test construction.

Keywords: *confirmatory factor analysis, position effect, test development, measurement, latent variable*

Testing the mediating effects of self-efficacy on the relationships between work-life balance, its antecedents and consequences

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The aim of this research is to develop a model of work-life balance (WLB), its antecedents and its outcomes. In addition, the mediating effects of self-efficacy (SE) between WLB and its antecedents are examined. The impact of WLB on key individual and organizational outcomes is also considered. The study used survey-based data collected from 1134 respondents in Canberra. Structural equation modeling was utilized in data analysis. Antecedents to WLB (mediated by SE) that are considered within the study are family and work control, work and family demands, work-to-family and family-to-work conflict, work-to-family and family-to-work enrichment, and colleague and supervisor support. Outcomes of WLB considered are turnover intentions, job satisfaction, anxiety/depression, social dysfunction, ill-health and job performance. Results show that in the base (non-mediated) model, only time-based and strain-based work-to-family conflict, work-to-family enrichment (affect), and family control are significant antecedents of WLB. Time based work to family conflict was the strongest predictor ($\beta = -.44^{**}$) followed by affect-based work-to-family enrichment ($\beta = .12^{**}$). The results also indicate that for this model, SE fulfilled the criteria of a mediating variable. The analysis of a mediated model did not show any suppression effect from the proposed mediator (SE). The direct effects of significant antecedents were not affected significantly by the presence of SE as the mediator. This indicates that SE is not a fully mediating variable. The impact of WLB on outcomes was consistent with findings in current research. Evidence was found for the effects of WLB on turnover intentions (-0.32^{**}); psychological strain (both anxiety/depression (-0.55^{**}) and social dysfunction (0.42^{**})), ill health (-0.20^*), job satisfaction (0.40) and job

performance (0.15^{**}). On average, 67% of variance in WLB is explained by the total variances of other variables. The main fit indices ($X^2=9017.026$, $df=3460$, $RMSEA <.05$, $NNFI .98$, $CFI=.98$, $IFI=.98$, $RFI=.96$) indicate that the final model fulfilled fit criteria. The present study breaks new ground by providing evidence for the role of SE in mediating the relationship between WLB and its antecedents. The impact of WLB on key organizational outcome variables is consistent with current research. These findings have both theoretical and practical implications for organizations and working individuals.

Keywords: *self-efficacy, work-life balance, job performance, job satisfaction*

Thank you for not smoking! How smokers could be tempted towards quitting

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An associative network model of the smoking self-concept was developed which could explain why people smoke, how they feel about smoking, and could provide options to tempt smokers towards quitting. Smokers should feel cognitive dissonance about the harmful consequences of smoking. Nevertheless, they smoke. The model assumes differentiation of the smoking concept into positive and negative subconcepts as a dissonance reduction strategy. Positive aspects of smoking are coping-aspects including coping with stress and controlling performance level. Social aspects of smoking are also positively associated with the behavior including being cool and socially accepted. Positive subconcepts of smoking are linked to the positive valence node, and negative subconcepts to the negative valence node of the self. Because of these cognitive links smokers overemphasize positive smoking aspects to strengthen the positive valence node of the self. Nevertheless, smoking is negatively and positively linked, thus indicating ambivalent attitudes towards smoking. This ambivalent assumption was investigated in an affective priming task ($N=30$). In this task, smoking and non-smoking related pictures were used as primes followed by a positive or a negative word. Results argue for the ambivalent

assumption and further indicate that smokers implicitly prefer non-smoking situations. They evaluate smoking situations more negative than non-smoking situations indicating negative feelings about positive aspects. This crucial finding led to the assumption that the associative network could be forced to form more cognitive links, links that connect the positive aspects of smoking with the negative valence node which should result in cognitive dissonance when the negative attitudes towards smoking were strengthened because they show the inadequacy of this dissonance reduction strategy. Using the associative model as well as empirical findings of the affective priming task, new warning labels without health-threatening information were developed and tested in an experiment ($N=30$). These warning labels contribute to positive smoking aspects and strengthen their negative sides. They were personally and generally formulated. Results showed that general warning labels changed perception of smoking aspects resulting in reduced smoking behavior. The new warning labels pick positive smoking aspects, turn them into negative and take away dissonance reducing strategies. Thus dissonance influences the behavior.

Keywords: *smoking, self-concept, cognition, cognitive dissonance*

The ability of offenders' moral reasoning and the forms they prefer: The causal influence between offending behaviour and moral reasoning type

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This study aimed to address the question that whether offenders apply forms of moral reasoning they preferred. Four hundred and thirty two incarcerated offenders, consisting of an adult ($n=290$, $M=34$ yrs, $SD=9.0$) and juvenile ($n=142$, $M=16.6$ yrs, $SD=1.4$) groups, completed this research. Gibbs et al.'s (1992) Moral Reasoning instrument SRM-SF, along with a set of four moral reasoning principle statements formed according to Gibbs's four-stage model of morality was presented to the respondents. Participants were asked to select the principle provided that reflects their own reasoning, the

principle most people in the community adopt, the principle that would help them survive in the community, the principle that is the best for the community, and which is most frequently employed by their friends. The lowest moral level as 1 and the highest level as 4. The highest score was found in the context of "the best" in all offenders, whereas the "self" and "most people" contexts received the lowest score assigned by the juveniles and adults, respectively. Albeit a significant correlation emerged between socio-moral reasoning maturity score (SRMS) ($M=288$ (adult), $M=249$ (juvenile)) and the score for "the best" context in the older group, but was not the case for the "self" in both groups. Besides, offenders' SRMS were significantly less mature than the moral principle given to "the best" context. These results show that participants distinguished between their own preferred moral reasoning and the moral reasoning they regard as optimal for a community. Also, contrary to the assumptions of developmental models of moral reasoning which define own moral reasoning level as also the limits of one's comprehension, offenders understand forms of reasoning that would be defined as a developmental level higher than their own. Thereby, one may understand different forms of moral reasoning equally well but from which one selects according to personal preference. Findings support an alternative interpretation of any relation between moral reasoning and criminal activity – namely that a particular form of moral reasoning causes crime but that people with criminal habits may select from their repertoires of forms most consistent with their habits.

Keywords: *offenders, moral reasoning, community*

The analysis simulation project [ASP]: A new method for simulating complex, dynamic and ambiguous information environments

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The aim of the present study was to develop a methodology to investigate reasoning judgment and decision-making in realistic complex, dynamic and ambiguous information environments (e.g. Security and Military Intelligence Agencies). The Analysis Simulation Project (ASP) methodology consists of a computer administered matrix of 64 information cells (50-130 words). The information accessing activity of participants is recorded including information cells selected, sequence of cells selected and the amount of time specific cells are accessed. Functionality testing has shown excellent usability and variability in behaviour. Information processing behaviour can be monitored, tracked, timed and analysed with great precision. ASP Methodology enables researchers to gather data on complex information processing environments that can be used to test a wide array of problems in the literature (e.g. Confirmation bias). Trainers and instructors can provide feedback to analysts as well as generate training and development programs with greater specificity than previously attainable.

Keywords: judgement, decision making, analysis simulation project, information processing, training

The application of the brain potential to a visual search task

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Basic studies on the visual event related brain potentials (V-ERP) have brought many fruits on perception and cognition studies. However, it is difficult to apply the V-ERP to practical fields, because of limitation of an eye movement. A specific event related brain potential is obtained with averaging EEGs at terminations of saccadic eye movements. The potential called the eye fixation related potential (EFRP) which shows several characteristics similar to V-ERP. EFRP changes with attention, sensation and cognition. The purpose of the present study was to compare between EFRPs to standard stimuli and those to target stimuli in a visual searching task. 10 participants were asked to search visual stimuli consisting of geometrical patterns on a

display. The task was to detect a specific colored pattern. Each pattern was lozenge or rectangular and colored green or blue. Set sizes were 20, 30 and 40. A target was defined by a pattern and a color at each trial. The participant was asked to detect a target. Each participant was assigned 48 trials. EEGs (Oz, Pz and Cz) were measured with amplifiers. An eye movement was measured with an EyeLink1000. EEG epochs associated with terminations of saccades were averaged to get EFRP. EEGs without noise and artifact triggered at offset of saccades were averaged separately to obtain EFRP to the target and other stimuli respectively. The reaction times increased significantly with set sizes. In EFRP, a positive component with latency of around 80 ms after terminations of saccades appeared clearly in all conditions at Oz, Pz and Cz. When the participants detected a target, positive component with latency of about 300 ms appeared significantly at all sites compared with non-targets. The positive component with latency of 300 ms would be the so-called P3 or P300 in ERP. The participant permitted to move eyes freely. In the present experiment, stimuli were presented on a display. Recently, we developed a new system to measure EFRP to objects at natural situations. Thus, EFRP has a possibility to apply to attention studies at industrial settings and at clinical fields.

Keywords: brain potentials, visual searching task

The application of the theory of planned behavior to teaching HIV/AIDS - related issues effectively among junior high school teachers in Indonesia

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It is estimated that there are more than one million injecting drug users in Indonesia (UNDP, 2008). On average, they started to inject when they were 14-15 years old; mostly at school canteens or toilets (Iskandar, 2008). As a result, teachers of local junior high schools have emerged as key players for HIV/AIDS prevention programs. A study was undertaken to explore the application of the Theory of Planned Behavior in explaining the intention among

teachers to teach sensitive issues related to HIV/AIDS effectively. In this cross-sectional study, three hundred and sixteen teachers from 25 different schools completed questionnaires regarding their intentions and behavioral, social and control beliefs in teaching drug education as well as reproductive health. Both environmental and individual barriers were also examined. The statistical analyses reveal that there are significant positive correlations of all theoretical constructs on the one hand and behavioral intentions in teaching HIV/AIDS related issues on the other hand. Almost 40% of the variance in teaching both two subjects is explained by the model variables. In general, their intentions are relatively high although there are several personal and environmental barriers that need to be addressed before the implementation of the programs. Therefore, before implementing the school-based intervention programs in Indonesia, a teacher training program is recommended as the key factor in affecting teachers' intentions. It is not only to increase their knowledge and skills but also to change their attitude. Active involvement of the parents and other related stakeholders is also encouraged.

Keywords: *theory of planned behaviour, HIV, prevention programs, teachers*

The application of vicious cycle anxiety model to women with urinary symptoms: A preliminary examination

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The current study aimed to delineate the nature of the associations between urinary incontinence (UI) symptom-severity, anxiety and continence safety-behaviour on the quality of life in women with over active bladder (OAB) symptoms. In particular, this study instigated initial testing of the suggestion that the Clark and Wells (1995)'s vicious cycle anxiety model could be applied to individuals with urinary symptoms (Hunt 1996; Perry et al., 2006). This was done in two parts, using multiple regression analyses and tested for mediation effects. Eighty-four women with urinary symptoms,

recruited from two continence services in Melbourne, filled in a self-report questionnaire package. This preliminary examination into the application Clark and Wells vicious cycle model to women with urinary symptoms is promising; support was found for both mediation hypotheses, which tested the model. The first part found anxiety partially mediated a relationship between UI symptom-severity and continence safety-behaviour, together anxiety and UI symptom-severity explained half of the variance in continence safety-behaviour. The second hypothesis of the vicious cycle model was also supported. As expected, continence safety-behaviour mediated the relationship between anxiety and the quality of life measure. Together these findings lend weight to the proposition that high scores in anxiety, would lead to continence safety-behaviour, in which over-vigilance, fluid restriction, and toilet availability are prominent issues, and lead to a decrease in quality of life.

Keywords: *urinary incontinence, anxiety, quality of life, women, over active bladder (OAB) symptoms*

The art of integrating forensic psychiatry/psychology with civil and criminal cases

AKAPUDO, H. (Meharry Medical College), BAILEY, T. (Meharry Medical College)

Forensic psychiatry encompasses the interface between law and psychiatry. A Forensic psychiatrist is first and foremost, a physician. Secondly, they are experts in evaluating individuals clinically, and applying those findings in a legal context. Forensic psychology on the other hand involves applying psychology to the field of criminal investigation and the law. Psychology professionals practice psychology as a science within the criminal justice system and civil courts. Billing in forensics is detailed and challenging, for both psychologists and psychiatrists. After a preliminary consultation, billing is recorded on an activity log. This log records all expenses, including evaluation of client, travel, and others such as testimony and deposition. Contractual rates are fixed, and services are billed based on time, regardless of

content or results. Psychological or neuropsychological assessment is billed separately. Psychological testing or psychometrics assesses the cognitive and emotional functioning of an individual. It involves the integration of information from multiple sources, such as personality testing, tests of ability or intelligence, tests of interests or attitudes, malingering tests, as well as information from personal interviews and collateral information. These standardized assessments help support a clinical diagnosis; and help courts decide issues such as disability, child custody, competency to stand trial, or to help assess job applicants or employees. Psychological assessment, diagnosis and subsequent treatment planning should be inextricably linked to each other. A forensic assessment is only useful if the results can be used to provide a clearer picture of the individual (e.g., needs, motivations, thought integration, relational style, etc.) and some indication(s) of what should be the best way to intervene. In other words, assessment results do more than inform diagnosis. They strongly influence treatment planning. Testifying for anyone is not desirable; however, forensic psychiatrists/psychologists provide this service out of necessity. As a forensic professional it is important to incorporate three fundamental themes of good practice: concrete credibility, an appropriate decorum, and being an advocate for one's opinion and position. This symposium will address documented civil and criminal cases outlining the processes of evaluations, assessments, billing, treatment modalities, court room testimonies and outcomes.

Keywords: *forensic psychiatry, Forensic psychology, criminal justice system, assessment, billing*

The bully/victim continuum: Stability of peer victimisation in school and patterns of internalizing and externalizing psychopathology in early adulthood

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This paper uses both prospective and retrospective data to explore patterns of peer victimisation and school difficulties in early

adolescence (at ages 12-13 years and 13-14 years); and to examine the longer-term outcomes (at ages 23-24 years) along the bully/victim continuum with respect to internalizing (depression, anxiety, and stress) and externalizing (anti-social behaviour) psychopathology. Initial data on some 1000 young people was drawn from the Australian Temperament Project (an ongoing longitudinal community study). The data presented here are from two time points in adolescence (at ages 12-13 years and 13-14 years) and at follow-up, aged 23-24 years. Participants were classified as belonging to one of four bullying subtypes: bully, victim, bully-victim, or uninvolved. The results show that the experience of peer victimisation in school is relatively stable across time. Furthermore, peer victimisation was also related to persistent levels of difficulties in school, namely social isolation. Results also indicated differences at follow-up (age 23-24 years) between bullies, victims, bully-victims, and those not involved in one of these capacities (uninvolved), in terms of both internalizing and externalizing psychopathology. Specifically, symptoms of anxiety and depression were highest among victims and bully-victims. Victims also reported higher levels of stress: while bully-victims and bullies reported higher levels of anti-social behaviour. These findings underscore the relevance of chronic peer victimisation in relation to adolescent wellbeing. In the longer term, they also point to concerning patterns of internalizing and externalizing psychopathology along the bully/victim continuum – particularly for those who are both victims of and perpetrators of this behaviour. Implications for prevention and intervention programs are discussed.

Keywords: *bully/victim continuum, peer victimization, schools, psychopathology, adolescence*

The competency model of salespersons in the household appliances industry in China

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The purpose of this study was to explore the competency model of Salespersons in the household appliances industry in China. With the stronger and wider competition between companies in the household appliances industry, salespersons become one of the most important factors which decide the success of the household appliances companies in China. Firstly, this paper established a preliminary competency model for salespersons in the household appliances industry by applying the technique of BEI (Behavioral Event Interview) to 20 salespersons and the comparison of the competency characteristic of salespersons with different performances by t-test with SPSS 17.0. Secondly, the competency model built above was checked by natural observation. The observation was carried out between 20 groups of customers and the salespersons who served them. The competency model constructed by both BEI and natural observation has the same two discriminate competent characteristics: Impact and Influence, and Trustworthiness. There were three unique competent characteristics found by BEI method: Achievement Orientation, Learning and Developing, and Emotion Stability. In addition, there were three unique competent characteristics found by natural observation method: Initiative, Insight, Serving Consciousness, and Knowledge of Product. By integrating the discriminate competent characteristics found by BEI and natural observation, we developed the competency model of Salespersons, with nine discriminate competent characteristics included. The competency model of Salespersons in the household appliances industry in China consists of nine discriminate competent characteristics as follows: Achievement Orientation, Initiative, Learning and Developing, Impact and Influence, Insight, Serving Consciousness, Trustworthiness, Emotion Stability, and Knowledge of Product. Natural observation was found to be one of the best methods that can be used to check the competency model developed by BEI.

Keywords: salespeople, household appliances industry, China, competent characteristics

The concept of human resource systems strength: Empirical testing and

contributions for a theory of content versus process in HRM

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Bowen and Ostroff's (2004) concept of human resource systems (HRS) strength is at the core of the current investigation. In strong HRS, employees share a view of desired behaviors, and therefore they exhibit the required patterns of efficient actions. In strong HRS, organizations are likely to show high level of results. Despite this link between the human resources function and performance, there has not been empirical evidence in support of such link. The goal of the current research was to test the link between HRS strength and performance, mediated by situation strength (Mischel, 1973; Schneider, Salvaggio & Subirats, 2002). The model further included leadership as an independent variable, since it has been proposed that it has an impact on how individuals shape their perceptions of the environment (Yukl, 1998). A total of 511 questionnaires were collected in a large hotel chain in Portugal, from both supervisors and employees. Data were collected at multiple level of analysis, from the individual to the department and the hotel levels. The questionnaire had gone through extensive development and testing, prior to the main research. Following Bowen and Ostroff's (2004), the questionnaire covered a number of key topics: HRS strength, situation strength, organizational performance, and leadership. Biographical data was also collected. Overall, the measures used in the study showed a good set of reliability and validity results. To test the model, confirmatory factor analysis was used. The models which revealed the best pattern of indicators (including normed chi-square, CFI, GFI and RMSEA) were selected. The results showed that there is a positive, direct, and strong relationship between HR strength and situation strength. A weaker but significant relationship was found between HR strength and performance. Positive and strong relationships were also found between leadership and situation strength, and between leadership and HR strength. Situation strength showed a direct and strong relationship with a subjective measure of organizational performance. No significant relationship was found between

leadership and performance. All together, these results provide strong support for Bowen and Ostroff's (2004) model, although a number of specific results suggest that the theory needs refinement, especially in terms of the sub-constructs put forward by the authors. Moreover, the investigation also allows reflecting upon a new measure to assess the nine meta-attributes of HRM strength.

Keywords: *human resources, situation strength, leadership, performance*

The cultural intelligence scale: What does it measure?

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Cultural Intelligence (CQ) is a newly popular topic in the cross-cultural psychological literature. CQ studies often assess the construct using the 20-item Cultural Intelligence Scale (CQS). The four components of the CQS (cognition, metacognition, motivation, behavior) show poor face validity, inviting empirical scrutiny of its construct validity. We examined the construct validity of the CQS by looking at the relationships of each of its four components to existing measures and to performance criteria. Native and international students at an American university and international students at a German university ($N = 335$) were administered the CQS and 11 established measures of self-concept, multicultural attitudes, personality, personal adjustment, and intercultural judgment as well as measures of culture knowledge and cultural experience that were developed for the study. Mixed results were found for each component. For example, CQS-Cognition was weakly related to performance on a culture knowledge test, but was not related to culture judgment. CQS-Metacognition was related to cultural exposure, but only weakly to culture judgment. CQS-Motivation was related in the predicted directions to two measures of multicultural attitudes, but not to sociocultural adaptation. Hierarchical regression analyses were performed

to assess the incremental value of the CQS over other measures in predicting sociocultural adaptation and cultural judgment. The CQS was found to have no incremental value. For international students, the CQS had no predictive value for sociocultural adjustment. The Cultural Intelligence Test demonstrates predictive value in certain circumstances despite its lack of face validity, but in others it appears to fall short. Its construct validity is not well established and it appears to be directly or indirectly tapping constructs that are assessed by other established instruments.

Keywords: *cultural intelligence, construct validity*

The development and validation of a multilingual forced-choice emotional intelligence (EQ) questionnaire for employment

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The aim of this research was to develop and validate a multilingual forced-choice EQ questionnaire for employment. This was accomplished by testing the efficacy of an instrument for sorting current high and low performers, and then using the instrument to screen applicants at selected companies in Japan and Korea. A team of Japanese, American and Korean researchers developed a pilot version of a forced-choice EQ questionnaire, called the EQ-NP (Neo-Predictor) based on themes put forth by the EQ Consortium. The test also included questions designed to measure Organization Fit, defined as the EQ of an organization or division within a company. The pilot questionnaire was validated on college and working populations in Japan and Korea, and a final version of 54 question pairs were selected using inter-item correlations, factor analysis, and multiple regression analysis. The questionnaire was then distributed and taken online by approximately 1000 customer-facing current employees in Japan and Korea in the pilot test, and by more than 2000 job applicants. A reliability analysis was run on all items of the EQ-NP; the resulting α was .90, suggesting a high level of internal consistency. Results suggested that

combinations of questions on the EQ-NP are able to effectively sort current employees based on company-determined Key Performance Indicators (KPIs), for example, sales, customer contacts, length of employment, etc. The explained variance (R²) analysis for both Japan and Korea ranges from .60 to .80 depending on the job and the country. Further, among a group of more than 2000 applicants for the jobs where the EQ-NP was used as a screening tool, the ability to predict higher than average performance ranged from 64% to 96%. Initial results of the development of a forced choice suggest that the EQ-NP is of use as a screening test in both Japan and Korea. With high levels of predictive ability, the test provides an objective prediction of an applicants' ability to effectively perform the work for which they are applying. However, more testing needs to be conducted to determine the long-term results of those hired with the EQ-NP, as well as determine its validity for other positions.

Keywords: *validation, multilingual, screening, employment, organization fit*

The development and validation of the Quality of Performance Appraisal Systems Questionnaire

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The perceived quality of a performance appraisal system (PAS) utilized by an employer, may influence the employee's levels of work engagement and job satisfaction. Although measures of work engagement and job satisfaction are readily available, no measures could be located to measure the quality of a PAS in a comprehensive manner, and as such it was not possible to test the hypothesis stated in the first sentence of this abstract. The aims of the study are to develop and evaluate the Quality of a Performance Appraisal System Questionnaire (QPASQ) and to provide practitioners with information regarding the elements of a PAS that influence behavioral outcomes most significantly. The items of the QPASQ were compiled after a thorough study of literature pertaining to the dimensions of an effective PAS developed. Aspects of quality addressed in the questionnaire included procedural and

substantive indicators. 300 students at a large South African business school, most of them employed in the role of middle managers, completed the QPASQ and standardized measures of work engagement and job satisfaction. The statistical techniques utilized to evaluate the questionnaire and assess the relationships between the constructs are reflected in the discussion of the results. The development of the questionnaire is discussed together with some psychometric characteristics of the scale. These include the factorial structure of the questionnaire and the relationship between QPASQ scores and work engagement, job satisfaction and the related intention to quit. Central statistics, as well as results pertaining to gender and race bias are also reported. Recommendations on the use of the QPASQ as well as suggestions for further research are presented. Of particular interest is how specific element of a PAS relates to behavioral outcomes. This will allow practitioners to design PAS and communicate information about systems that will enhance positive work outcomes.

Keywords: *performance appraisal, work engagement, job satisfaction, Quality of a Performance Appraisal System Questionnaire, behavioral outcomes*

The development of an instrument to assess the unmet needs of young people who have a sibling with cancer

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This presentation will report on the development of a needs measure for young people (aged 12-24 years) who have a brother or sister with cancer - the Sibling Cancer Needs Instrument (SCNI). It is the first known wide-ranging needs-based measure for this population - aiming to systematically assess and monitor the needs of this comparatively under-researched and largely under-served population. Phase 1 of the project involved a qualitative exploration of needs with this population (focus group, telephone interviews), and a survey of staff who worked with them

resulting in the first version of the SCNI. Following this, the SCNI was piloted on 71 young people. Phase 2 consists of psychometrically testing the latest version of the SCNI (73 items across 7 conceptual need domains) on a wider and larger sample, as well as measuring psychological distress and identifying risk and resilience factors such as family functioning, sibling relationship, and parent/child relationship. Results regarding unmet needs in the following domains will be reported: information about my sibling's cancer; time-out and recreation; practical assistance; support from friends and other young people; dealing with feelings; understanding from family, and relationship with sibling. As well, the relationship between these unmet needs and other indices, such as family functioning and psychological distress will be discussed, along with preliminary reports on the psychometric properties of the SCNI. The development of the SCNI measure is an important step in assisting to systematically assess, monitor and better meet the various needs of this under-served population of young people at risk of ongoing psychosocial challenges, both within the family and in the community at large.

Keywords: *young people, cancer, family*

The differential effects of work-group resources on well-being and engagement for male and female police officers

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Research investigating gender differences in well-being within high-stress, traditionally masculine occupations, has often produced conflicting results. Although some research has demonstrated that significant differences exist between males and females for a range of physical health and psychological well-being indicators, other research has failed to establish such differences. A limitation of much of this previous research is the tendency for gender differences to be studied in isolation, which fails to account for contextual factors that may assist in explaining the presence or absence of significant effects. To address this limitation, the present research adopted a contextual approach

to the investigation of gender differences. Utilising the motivation hypothesis of the job demands-resources model as a theoretical framework, the primary purpose of this research was to investigate the moderating effect of gender in a structural equation model (SEM) containing several resource variables and well-being indicators. This research extends current occupational stress research by incorporating multiple forms of resources available to employees, such as individual job-related resources (control over the timing and method of work), individual-organisational interface resources (e.g., alignment with strategic priorities), work-group level resources (supervisor support, colleague support, and workgroup cohesion), and non-work resources (social support from friends and family). Furthermore, this research also adopted a positive-strengths focus in which the ability of resources to predict three positive health outcomes was included. The sample consisted of 1956 male and 626 female police officers, who completed an online questionnaire. Results indicated that supervisor and colleague support, greater alignment with the strategic priorities of the organisation, job control, and work-group cohesion were associated with positive well-being, higher engagement, and greater intrinsic job satisfaction. After establishing factorial invariance of the measurement model, a number of structural pathways from resources to well-being were moderated by gender. Although this research was limited due to the cross-sectional methodology employed, the relationships discussed above will be examined further utilising longitudinal data (in early 2010).

Keywords: *police, gender differences, well-being, occupational stress*

The discounting effect of counterfactual thinking in economic decision-making

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Counterfactuals are thoughts of what might have been. Previous research has indicated that counterfactual thinking has a preparatory function. This function plays a role in behavior

regulation and performance improvement. The purpose of this study was to explore the impact of counterfactual thinking on economic decision-making, in order to clarify the contribution of the prepared function of counterfactual thinking for economic Decision-making. We investigated 289 stock investors in real situations in the first study, and 106 students in simulated situations in study two and three. The results indicated that the findings were inconsistent with prospect theory on risk decision. In study one, the stock investors tend to be conservative to make decisions and set the invest goals (stop loss and stop gain) when facing high risk conditions after priming counterfactual thinking, which inhibits risk-seeking. On the other hand, subjects tend to be adventures when facing low risk conditions after priming counterfactual thinking, which promotes risk-seeking. For the control group, there were no significant differences for the subjects to set the invest goals in different risk conditions after priming counterfactual thinking. The discounting effects were found where counterfactual thinking impacts on economic decision-making.

Keywords: *counterfactual thinking, economic decision-making, behavior regulation, performance improvement*

The dynamics of the factors of occupational prestige during financial and economic crisis

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Inadequate quality of the labor force becomes more and more critical for Ukraine, as well as disproportion between employment market and educational services market. The deficit of workers' occupations is most acute. The development of entire career guidance systems for the young generation is one of the ways to solve this problem. The prestige of workers and other mass professions should be further enhanced. While choosing the research methods we made an assumption that one of the factors

which has become the reason of imbalance between the employment market and educational market is public belief about occupational prestige. The questionnaire we used was compiled in line with the titles classifier currently acting in Ukraine based on ISCO-88. The monitoring of the level and psychological factors of the prestige in occupational choice had two cycles of representative across-country survey ($N = 2400$) to define the status level of certain occupations. Focus-group research was also carried out with a variety of target audiences was directed at discovering the causes of the choices. There is a difference of prestige conception between two group categories: adults and young people from Ukraine. The research reveals directions of change in forming the ideas about prestige among youth who did not experience Soviet ideological system influence (socialization after Soviet era collapse). Labor market reactions resulted in the changing of the rating of factors of occupational prestige, these included: social capital (helpful acquaintances became more important), weights of comfortable labor conditions, personal independence, opportunity for creativity, and carrier perspectives which decreased in adult cohorts. Personal independence and opportunity for creativity remained as important factors of the occupational prestige in crisis circumstance for teenagers. Solid prognosis was made with regard to popular amid masses occupations, which are in deficit, for the period of three to five years for the Ukrainian labor market dynamics. Both objective and subjective reasons for occupational prestige were taken into consideration. In order to verify the social transformation effect on the psychological mechanisms of occupational prestige dynamics it is necessary to consider cross-cultural frameworks to compare the research results with the latest international research data.

Keywords: *career guidance, Ukraine, social transformation, occupational prestige*

The effect of "victim participants" expression of emotions on the judgments of mock jurors

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The Flexible Correction Model (FCM: Wegener & Petty, 1997) suggests that people can adjust their judgments toward a target if they are aware of the contextual effect which may bias their judgments. The present study examined if the jurors whose attention were attracted to the burning emotion of "victim participant" would be conscious of the possible bias in their judgments and, as a result of an overcorrection, make judgments in favor of the defendants. To make mock jurors be conscious of the possible bias in their judgments, the hypothetical victim's mother or father was depicted to serve as the "victim participant" who expresses bald emotions in court. 131 Japanese undergraduate students participated in the study. They read a scenario depicting a mock trial and made judgments on the appropriate punishment for a homicidal defendant. The scenarios were manipulated on who the "victim participant" was (victim's mother, father, or their lawyer) and their emotional reaction (anger, grief, or impassive). In the bias-inducing condition, the victim's parent was depicted to express their emotion in bar. Respondents' sentence judgments in such conditions were compared to those in the control condition where the victim's lawyer talked unemotionally. Contrary to our assumption, the ANOVA revealed that the two manipulated factors (victim participant type and their reaction) had no significant effect on the sentences the respondents gave. In this study, overcorrection based on FCM was not observed. Moreover, whether the "victim participant" showed emotional or impassive reactions had no influences on sentence. Japanese legal experts consider the "victim's participation" system as problematic because the judgments of citizen judges (naive lay public) would likely be influenced by the degree of emotion expressed by crime victims and their family, consequently giving overly severe penalty to the defendants. However, the empirical findings of this study showed a lack of impact of "victim participants" on sentences.

Keywords: *contextual effect, judgement, victim participant, bias*

The effect of different types of music on mood and verbal performance

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This study aimed to investigate the arousal and mood effect of different types of music on verbal performance, on the basis that: 1) there are shared neural substrates between language and music such that the brain processes language like music in terms of its auditory properties like tone and pitch; and 2) music training can improve children's reading ability. Seventy-eight English-speaking undergraduates were selected based on their neither-type preference in the Composite Scale of Morningness to control for chronotype. They were allocated randomly to 3 different music conditions in order to induce a corresponding emotion: happy, sad and neutral (control) conditions. The different music types controlled for mood between conditions, with each group consisting of 26 participants. Positive and negative affect as measured by PANAS was taken pre- and post-music exposure. Verbal performance as measured by PPVT4 was taken after music listening. Behavioural responses as measured by finger tapping was obtained during music listening. Results showed that listening to different types of music did not induce significant changes in one's positive and negative affect or arousal. Although participants tapped more in happy music than in sad music, there were no significant differences in verbal performance among the 3 music conditions. It was concluded that different types of music may selectively affect only certain cognitive tasks and can have differential effect on various behavioural and cognitive measures. Methodological issues and implications of the use of music in language learning are discussed.

Keywords: *arousal, mood, music, verbal performance*

The effect of leader-member exchange and coworker trust on safety behavior

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In the present study, we examined leader-member exchange and coworker trust as predictors of safety behavior. Drawing on social

exchange theory and the norm of reciprocity, we proposed a mediated model predicting employee safety behavior. The model was tested using a cross-sectional survey. The participants were 232 air traffic controllers and air maintenance in China. A total of 94% of them were male. Hierarchical regression analysis showed that leader-member exchange was positively related with both safety compliance and safety participation. Affect-based coworker trust partially mediated the relationship between leader-member exchange and safety participation, while cognition-based trust did not show this trend. This study adds to the safety behavior literature that cognition- and affect-based coworker trust can play different role. Implications of these findings are discussed.

Keywords: *leader-member exchange, coworker trust, safety, social exchange theory, reciprocity*

The effect of personality disorders and coping styles on addict's attitude towards addiction and selection of kinds of drugs

KOOSHKI, S. (Islamic Azad University)

The purpose of this study was to examine the effect of personality disorders types and its severity and coping styles on the attitudes towards use, and selection of drug used. 375 male adults belonging to various groups of drug users by stratified sampling completed a Personality Disorders Questionnaire (PDQ4; Hiller & et al., 1992), Coping Style (Carver & et al., 1989), Attitude on Drug Use Questionnaire (DeRight, 1998), and Demographic Characteristics Questionnaire. The findings confirmed that a meaningful relationship does exist between personality disorders, and attitude towards drug use, coping styles, and attitude towards drug use. It also become apparent that differences between coping styles and drug type used are not meaningful. Results also indicated that the role of each person's attitude in prediction of personality disorders. The findings emphasis the necessity of prevention programs for reduction of personality disorders, coping styles for drug dependant persons and effective attitude-altering programs related to drug use.

Keywords: *personality disorders, coping styles, drug use, attitudes, drug dependence*

The effect of situational factors on unsafe driving behavior

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The purpose of the current study was to explore the effects of situational factors on unsafe driving behavior. Specifically, we empirically tested the impact of time pressure, descriptive norms, as well as the base rate of accident on drivers' violation behavior. A total of 168 drivers were recruited to read two of eight scenarios and were asked a series of questions after each scenario, respectively. Demographic questions were at the end of the survey. A 2 x 2 x 2 mixed design was used for the scenarios, with one within-subjects variable (descriptive norms) and two between-subjects variables (time pressure and safety record of local district). Hierarchical Linear Modeling (HLM) analysis showed that the demographic variables were not significantly related with the driver's violation behavior, so they were not taken into account. HLM analysis showed descriptive norms are negatively related to driving violation behavior, and time pressure is positively related to driver's violation behavior, while base rate of accident is not related with unsafe driving behavior. Results from this study indicate that drivers' behavior would be significantly different under different context. The implications of these results for traffic safety research as well as traffic safety managerial practice were discussed.

Keywords: *situational factors, unsafe driving behaviours, time pressure, violation behavior, accidents*

The effect of the length of meditation experience on muscle relaxation

CHU, L. (Chung Shan Medical University)

Muscle tension is an automatic physical response to stress, and the literature overwhelmingly indicates that meditation is an effective treatment for it. The benefits of

meditation may be attributed to its nature. Lutz, Slagter, Dunne, and Davidson (2008) found that meditation practices' potential regulatory functions on attention and emotional processes can cultivate such ends as well-being and emotional balance. Although the research literature has clearly provided considerable evidence that meditation practice can reduce muscle tension, few published studies have inquired into whether it is more effective for people who have lengthy meditation experience than for those just starting. The development of concentration or mindfulness through the experience of meditation would become increasingly effortless in sustaining focus or surrendering to the flow of experience without emotional disturbance (Epstein, 1990; Lutz et al., 2008). This means that its effects in terms of muscle relaxation could vary with the length of time people have been practicing meditation. This study tested whether the amount of experience that people have in practicing meditation can affect the extent and the onset time of muscle relaxation while meditating. We assigned 20 male and female graduate students at National Central University in Taiwan randomly to an experimental meditation group and a control group. The meditation group consisted of participants with different amounts of meditation experience. One had more than five years of such experience, one between three and five years, three had between one and three years, three had less than one year, and two had none. The control group consisted of only participants with no meditation experience. We defined meditation experience as having learned to practice meditation before participating in the experiment and having had a regular daily habit of practicing meditation for at least 20 minutes. We recorded the participants' psychophysiological measure of stress as reflected by their muscle tension with an EMG, both before and after each treatment. Each participant in the experimental group took part in an eight-session meditation program, with each session lasting for 20 minutes. The control group subjects did not receive any relaxation training. The repeated measure ANOVA was used to investigate changes between baseline and post-intervention scores in the EMG measures. The results show that the meditation group had significantly reduced EMG activity on the right and left shoulders after meditation

treatment ($t_{right} = 3.85$; $p < 0.01$; $t_{left} = 3.22$; $p < 0.05$). However, the control group experienced no significant change between the baseline and post-intervention scores in the EMG measures. In order to explore whether the length of the meditation experience benefited muscle relaxation, we not only used an analysis of one-way ANOVA tests to compare the mean differences in the EMG measures for the various meditation experiences of the meditation group, but also engaged in qualitative tests to simultaneously depict the change in the state of muscle tension during the meditation process. Scheffe's post-hoc test showed that subjects with over three years of meditation experience experienced greater muscle relaxation than those with no meditation experience after meditation practice. We also found that the shoulder muscles of a participant who had been practicing meditation for more than five years relaxed significantly more quickly than those of one with no previous meditation experience. These findings indicate that the amount of time people have been practicing meditation affects the extent and rapidity of muscle relaxation during meditation. This study found that the amount of meditation experience people have affects the speed with which muscle relaxation during meditation occurs, with the muscles of the participant having the most experience relaxing more quickly during the meditation process than those of a participant with no previous experience. This leads to the conclusion that the ongoing practice of meditation may lead to increasingly efficacious physical relaxation. This means that those who practice meditation frequently and repeatedly can control themselves, and therefore return to a normal state of body and mind, with increasing rapidity whenever they become nervous or upset. We suggest that meditation practice could be incorporated one's daily routine career or family.

Keywords: *mediation, muscle relaxation, experience*

The effect of trust in authority on cooperation: The mediator roles of distributive fairness and procedural fairness

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The present research aims to explore the effects of trust in authority and fairness on people's attitudes and cooperative behaviors across disaster and non-disaster social situations. We applied one field study in disaster situation (study 1) and one experimental study in non-disaster situation (study 2) to investigate the effect of trust in authority on people's attitudes and willingness to cooperate, and to further examine the mediator role of fairness. In study 1, we collected 424 survey data during the reconstruction process after "5.12" Wen Chuan Earthquake in China. Trust in local government, distributive fairness, satisfaction of local government and willingness to allocate resources to communal goods were measured. In study 2, we manipulated two level of trust in authority (high vs. low) in a community scenario. 55 undergraduate students participated in the experiment. Distributive fairness, procedural fairness, satisfaction of community agent and cooperative behavior were measured. The results showed that both in disaster and non-disaster social situations, trust in authority affect people's evaluations of authority and their cooperative behaviors. The more people trust, the more positive they evaluate the authority, and the more resources they are willing to allocate to communal goods. Furthermore, procedural fairness as well as distributive fairness partially mediates the effect of trust in authority on evaluation. While only distributive fairness mediate the effect of trust in authority on cooperation which is different from the prior research done in western culture background. Results from 2 studies in different social situations provide consistent evidence for the effects of trust in authority and fairness on people's attitudes and cooperative behaviors. This study tries to apply social psychology approach to the field of public administration on topic of trust in authority to investigate the mediator role of fairness in the relationship between trust and cooperation, and also

compare the effects of distributive fairness and procedural fairness.

Keywords: *authority, distributive fairness, disasters, procedural fairness*

The effect of vehicle speed and motion perception ability on elderly pedestrians' crossing decisions

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The present experiment investigated perceptual age-related factors likely to contribute to risky street-crossing decisions in elderly pedestrians. Previous research has shown that older people make many unsafe crossing decisions when vehicles approach at high speed, but miss many crossing opportunities when vehicle speed is low. It can be assumed that elderly pedestrians have trouble in analyzing vehicle motion and thus mainly use simplifying heuristics based on vehicle distance. The purpose of our experiment was to determine whether the elderly peoples' crossing decisions are actually explained by their capacity of motion perception. 20 young (20-30 years), 20 younger-old (61-70 years) and 20 older-old (71-83 years) participants took part in the experiment. All participants carried out a street-crossing task in a virtual environment displaying an urban scene with traffic coming from one side. The time gap between the cars varied between 1 and 7 seconds. Five vehicle speeds between 30 and 70 km/h were simulated. The participants had to cross the experimental road when they judged that crossing between the approaching cars was safe. They were also submitted to a series of motion discrimination tasks. In line with earlier findings, elderly pedestrians exhibited more risky decisions when vehicles approached at high speeds and missed more opportunities to cross when vehicles approached slowly. Regression analyses indicated that in young pedestrians, neither unsafe decisions nor missed opportunities were predicted by motion discrimination thresholds. In younger-old pedestrians, the capacity of speed discrimination predicted unsafe decisions at high speeds as well as missed opportunities at low speeds. In older-

old participants', only missed opportunities were explained by motion discrimination thresholds. As a whole, these findings demonstrated that motion discrimination abilities play an important role in elderly pedestrians' street-crossing behaviour. The decline in motion discrimination was found to explain risky decisions especially in early aging. Other factors, such as cognitive and motor declines, are likely to become predominant at later aging. More generally, our study confirmed that high vehicle speed is an important risk factor for elderly pedestrians as it is often not perceived. Traffic calming measures, especially in urban areas, can be recommended as an effective countermeasure.

Keywords: *motion perception, elderly, pedestrian crossings, judgement*

The effectiveness of dialectical behavior therapy for borderline personality disorder: A naturalistic investigation

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The first aim of this study was to investigate whether Dialectical Behavior Therapy (DBT) is effective with real world clients in real world settings in Australia. The second aim was to investigate whether a modified version of group-only DBT is as effective as the more comprehensive manualized version. Thirty-seven individuals with Borderline Personality Disorder (BPD) who were referred to DBT across two community mental health services were included in the study. The seven individuals who completed a modified version of DBT in one setting were compared to six individuals who completed the full version of DBT in another setting. Individuals were assessed before and after a year-long cycle of DBT with the following assessment tools: The Structured Clinical Interview for the *DSM-IV* I and II, the Suicidal Behaviors Questionnaire, the Beck Depression Inventory— Second Edition, the State-Trait Anxiety Inventory, the World Health Organization Quality of Life – Brief, the Ways of Coping Checklist, and the Affective Controls Scale. Results revealed that both groups showed significant reductions in the number of borderline personality disorder traits, self

reported depression, and fear of anxiety and depressed mood. The more comprehensive version of DBT was superior in reducing the number of comorbid conditions as well as state anxiety. A more cost-effective version of DBT can be successful in producing change in those with BPD. However, the more comprehensive manualized version of DBT is superior on some but not all outcomes.

Keywords: *dialectical behaviour therapy, borderline personality disorder*

The effects of personality, cultural context, and situation on environmental concern: Comparing zoos and universities in the U.S. and China

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The increasing salience of environmental problems has led to increasing interest in understanding environmental attitudes. Surveys routinely indicate less public concern about some environmental issues, for example climate change, than most experts consider appropriate. Perhaps more important, most people are not demonstrating the significant behavioral changes needed to address environmental problems. Although they may not consider the issue to be important, it is also possible that they believe responsibility for addressing the issue lies elsewhere. What predicts environmental concern and beliefs about how environmental issues should be addressed? How can environmental concern and understanding be increased? The present study was designed to examine the impact of several important factors on environmental concern. Firstly, cultural context, in which we compared two countries where environmental issues are highly salient but where the sociopolitical structure is very different: China and the U.S. To date, environmental attitudes in China have not been extensively studied; some surveys suggest a fairly low level of concern as well as knowledge about environmental problems. In order to better understand the reasons for cross-country differences, we also measured some personality variables: level of national identification, and self-construal. Finally, we wanted to explore the

possibility that situations can be deliberately constructed to heighten environmental concern. Zoos in the U.S., and to some extent in China, try to deliver a conservation message. Thus we compared zoo and non-zoo locations. Data were collected in four locations: in a small U.S. zoo, a liberal arts college in the U.S., the Panda Research Base in Chengdu, China, which is a zoo-like facility with a strong conservation theme, and Sichuan University, also in Chengdu. At least 50 participants were surveyed in each location. Surveys included brief measures of environmental concern, national identity, and perceived responsibility to address environmental problems, as well as Singelis's Self-Construal scale, a measure of interdependent or independent self-concept. Results are discussed in terms of cultural differences, and particularly in terms of how these variables relate to perceived responsibility for addressing environmental problems.

Keywords: *environmental attitudes, climate change, cultural context, personality variables, zoo*

The effects of transformational leadership on employee innovation and job performance: Explicating the mediating effects of regulatory focus

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This study examined the possible process through which transformational leaders influence followers' innovation and performance levels and proposed a mediating role for regulatory focus. We hypothesised that promotion focus and prevention focus would mediate the relationship between transformational leadership and innovation and transformational leadership and job performance. In sum, in line with previous research and in light of the conceptual links discussed, the present study hypothesised that transformational leadership would explain significant variance in innovation and performance after controlling for the influence of the demographic variables and positive/negative affect. Second, promotion focus was expected to be positively related to innovation and performance, and prevention

focus negatively related to the outcome variables. Third, transformational leadership was expected to be positively related to promotion focus and negatively associated with prevention focus. Fourth, promotion focus and prevention focus were predicted to mediate the relationship between transformational leadership and innovation. Finally, theoretical reasoning suggested that promotion focus and prevention focus would mediate the relationship between transformational leadership and performance. The sample included 174 employees from various organizations in Victoria who were invited to complete an anonymous on-line survey. The majority of respondents were from the private sector organizations (57%), with (48%) from organizations with more than 500 employees. Of the 174 employees in the study sample, (63%) were female and (37%) were male. The average age of participants was 36 years ($SD=10.96$, range = 19-64). The average length of tenure was 5 years ($SD= 5.77$), and the average length of time in their occupation was 9.8 years ($SD= 9.7$). The majority of employees (68%) were in positions that held no management responsibility. Discrete relationships within the research model were analysed using a series of hierarchical regression analyses. The effects of demographic variables such as job level and gender, as well as positive/negative affect were controlled in the hierarchical regressions. Multiple regression analyses were conducted to determine the extent to which transformational leadership, regulatory focus, positive affect, negative affect and other demographic variables explained unique variance in the criterion variables. The data from the regressions demonstrated the pattern of association among the predictors and criterion variables, innovation and job performance and were largely in support of the hypotheses. The study investigated the relationship between transformational leadership, regulatory focus and the important organisational outcomes of innovation and performance. The study contributes several important findings to the understanding of how leadership and individual motivation orientations influence employee innovation and job performance. First, the study extends regulatory focus research to contribute to the understanding of the complex nature of the mediating influences of this individual difference

construct. Second, in delineating and supporting the linkages among transformational leadership, regulatory focus and performance outcomes, the findings inform leadership approaches to different individual motivational orientations in organisations. Third, these findings provide an empirical response to the needs for research to investigate whether situational primed participants achieve the same results as chronically predisposed participants. Fourth, this study also responds to scholars' call for further research to determine the appropriateness of the different scales used to measure regulatory focus, to ensure they are measuring a single phenomenon. Although a number of hypotheses were not supported, these non-significant results are useful for contributing to the iterative process of theory development (Cervone et al., 2006).

Keywords: *transformational leadership, job performance, innovation, affect, regulatory focus*

The effects of vipassana meditation on well-being, mindfulness and substance use

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This paper reports on two studies examining the effects of Vipassana meditation in a community sample. Vipassana is a meditation technique taught worldwide in 10-day residential courses. While some independent research has been conducted overseas most studies examine Vipassana in prison settings. Study 1 examined whether individuals with prior experience of Vipassana (old students) report greater well-being and mindfulness and less substance use than individuals without prior experience (new students). Study 2 examined whether students completing the Vipassana course, compared to a waitlist control group, scored higher on well being and mindfulness and lower on stress and substance use at post course. Whether changes were maintained at follow-up and due to actual meditation practice were examined. Study 1 participants were 233 adults (56.2% new students) enrolled to complete a Vipassana meditation course in NSW. Online or hardcopy

questionnaires assessed demographics, meditation practice, mindfulness, well being and substance use. In Study 2, 184 participants completed measures at pre-course, 122 at post-course, and 90 at the 6 month follow-up. A waitlist control group (n=50) also completed measures at two time points before commencing the course. At baseline old students scored significantly higher (MANOVA) on mindfulness, acceptance and self-compassion and lower on stress compared to new students. Overall WHO wellbeing scores did not differ. Old students were also found to abstain significantly more from substance use during a typical use week in the preceding three months. More frequent meditation practice was associated with greater well being, mindfulness, self-compassion and abstinence from alcohol. Repeated measures ANOVAs indicated Vipassana course participants improved more than control participants from pre-course to post-course on well-being, mindfulness, stress and self-compassion, but not substance use. Six month follow-up will be reported as will associations between frequency of practice and well-being. Study 1 provided some support for the efficacy of Vipassana meditation over the long-term, particularly among those practicing the technique more frequently. However, the possibility that older students were not typical of all Vipassana students limits generalization. Study 2 will more clearly indicate the effects of the Vipassana course immediately post course and at a 6-month follow up.

Keywords: *vipassana meditation, well-being, mindfulness, substance use*

The empirical research on the relationship between organizational culture and organizational commitment under organizational change

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With the fierce competitions of enterprises worldwide, organization changes are launched frequently. Traditional paradigm in studying organizational change focused on macro problems, such as organizational development, strategy choice. We wanted to study

organizational change from micro perceptive and in individual level. We treated organizational change (OC) as context variable, and concentrated on organizational commitment. The purposes of our study were: (1) find the differences of organizational commitment and organizational cultures between the units with OC and units without OC; (2) explore the relationship between organizational culture and organizational commitment under the circumstance of OC; and (3) develop strategy to improve organizational commitment for companies under changes through construction of organizational culture. We used the Competing Value Framework of Organizational Culture and hypothesized: (1) OC would influence organizational commitment and organizational culture, whereby lower Organizational Commitment would be found in Units with Changes; (2) Organizational culture in the units with changes would be dominant by the value of Adhocracy and Market, otherwise the units without changes would be dominant by Clan and hierarchy value; (3) Organizational culture would be positively related to organizational commitment under the OC. Measures of OC (self-developed), Organizational Commitment (Porter Mowday, 1979), Organizational Culture (Quinn, 1991) were used. We chose China Gezhouba Group, a state-owned company with 36,000 employees, as our study sample. In last five years, the Gezhouba Group experienced a series of OC. We investigated 1000 respondents in Gezhouba China Group and obtained 546 valid responses. The statistical method used was a regression analysis and ANOVA. Our result indicated that hierarchy, adhocracy and market value of organizational culture was positively related to affective Commitment, but only Market value was positively related to Normative Commitment and Continuance Commitment. It also demonstrated that technical changes in organization would significantly influence employees' organizational commitment negatively, but structure changes and managerial system changes had no significant impacts on organizational commitment. Employees in the units with changes would perceived lower Clan value. Our study verified that relationship between organizational culture and organizational commitment under OC. It also revealed that in Chinese background,

technical changes will easily have negative impact on organizational commitment. The implication of these results was discussed and further researches were proposed.

Keywords: *organisational culture, organisational commitment, organisational change*

The epidemiology of non-suicidal self-injury (NSSI) in Australia

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The aim of the present study was to estimate the prevalence and describe the features of non-suicidal self-injury (NSSI) in the Australian population by sociodemographic and cultural variables, psychiatric morbidity, childhood trauma and substance use. 12,006 Australians aged 10+ who were randomly selected from the Australian Electronic White Pages completed a 14 minute Computer Assisted Telephone Interview (CATI). The interview included questions on demographics, NSSI, general mental distress, childhood trauma and substance use. Odds ratios and chi squares were calculated to derive measures of effect size between groups. The four week prevalence of NSSI was 1.1% ($n = 129$) and was slightly higher for women (1.2%) than men (0.9%). It was also higher among Indigenous respondents (2.4%; $n = 4$) compared to the overall sample, but the Indigenous sample size was small ($n = 183$) and so results should be interpreted with caution. The most common methods of self-injury were scratching (45.9%) and cutting (33.8%) for females and hitting a part of the body on a hard surface (20.4%), scratching (18.5%) and cutting (18.5%) for males. For both men and women the most common reasons for NSSI were emotional regulation (56.9%) and self-punishment (26.4%). Respondents who self-injured were 10.0 times more likely to report clinically severe mental health problems (95% CI=6.6-15.2), 4.0 times more likely to report neglect (95% CI 3.4-4.6, adults only), 4.1 times more likely to report physical abuse 95% CI 3.5-4.7, adults only), 4.0 times more likely to report sexual abuse 95% CI 3.4-4.8, adults only), 3.7 times more likely to smoke tobacco (95% CI=2.6-5.3), 5.1 times more

likely to drink to get drunk (95% CI=3.3-7.9), and more likely to use marijuana (OR=3.7, 95% CI=3.3-4.3), amphetamines (OR=3.8, 95% CI=3.3-4.5), ecstasy (OR=3.8, 95% CI=3.2-4.5), inhalants (OR=5.7, 95% CI=4.3-7.7), heroin (OR=5.6, 95% CI=4.0-7.9), cocaine (OR=3.6, 95% CI=2.9-4.4) and LSD (OR=3.5, 95% CI=2.9-4.2). The respondents who reported NSSI were, in many ways, a troubled group at higher risk of psychological morbidity than the general population. The proportion of NSSI among males and females was not very different, perhaps challenging the traditional view that NSSI is more prevalent in females.

Keywords: *non-suicidal self-injury, Australia*

The family and community questionnaire: A multidimensional measurement of poverty

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Poverty is a world-wide phenomenon that adversely affects the well-being of families. A lack of consensus on the definition and measurement of poverty hinder effective policy formulation and intervention programmes to alleviate poverty. It is argued that poverty is a multi-dimensional construct encompassing income and finances; employment; education; housing; health; and access to community services. It is proposed that the adoption of such a holistic concept of poverty, would help in identifying pathways by which poverty's adverse effects on adults' and children's psychological adjustment could be attenuated. The Family and Community Questionnaire (2007) was developed by researchers to obtain demographic and descriptive information about the sample, and data on the six indices of deprivation required for calculation of an overall deprivation score (Index of Multiple Deprivation). The initial Family and Community Questionnaire has been shown to have reasonable psychometric properties (N=71). The Family and Community Questionnaire has face validity, however, no information yet exists about the content and construct validity of the questionnaire. The Family and Community Questionnaire also has good test-retest reliability and is also able to

identify "poor" vs. "not poor" on the basis of participants' IMD scores (Index of Multiple Deprivation).

Keywords: *poverty, well-being, family*

The high potential label and its career effects

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This large-scale quantitative study aimed to examine the effects of being identified as a high potential (or not) on a number of career variables, taking into account the openness of communication that is adopted by organizations with respect to their talent management procedures. A total of 711 respondents (250 high potentials versus 461 non-high potentials) from 12 organizations participated in the online survey. Half of the participating organizations had implemented, at the time of survey administration, a policy of openly disclosing which employees are on their high potential list; the other half had a policy of keeping this information hidden from their employees. We found positive main effects of being identified as a high potential, and of organizational communication openness, on job performance, career success, and commitment. Furthermore, we found interaction effects of being identified as a high potential with communication openness on salary, satisfaction with performance, and satisfaction with job security. Overall, results indicate that adopting an open communication strategy about talent management generates the most desirable outcomes. However, nuance must be applied in interpreting and generalizing these findings.

Keywords: *high potential identification, openness of communication, job performance, career success, job satisfaction*

The impact of biological attribution on stigma and help seeking behaviour for depression in young people

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Adolescence is a high-risk period for the first onset of depression. Effective early intervention for depression is impeded by the reluctance of young people to seek help and this may significantly influence the trajectory of the condition throughout the life course. A potential barrier to help seeking is stigma. According to Weiner's (1988; 1995) Attribution Theory, increasing biological causal attributions of depression should decrease stigma. Other researchers have reported that biological causal attributions are associated with higher levels of stigma. However, almost all of the evidence to date has been derived from cross sectional studies. The current study employed a randomised controlled trial (RCT) methodology to examine the effect on stigma and help seeking of manipulating causal attribution. A sample of 300 year 11 and 12 students were randomised to receive online information containing either: (1) biological causal attributions; (2) psychosocial causal attributions; or (3) no causal attributions (control). Scores for all conditions were examined at baseline and post-test. It was hypothesised that biological causal attributions would reduce stigma and increase help seeking intentions from both informal and formal networks. This study found significant differences in the effect of the two types of attribution information intervention. It was found that the biological attribution condition did not reduce stigma but was associated with increased help seeking intention relative to the control condition. This study is the first RCT to investigate the question of whether an intervention designed to manipulate causal attribution has an effect on stigma and/or help seeking for a mental disorder. The results have significant implications for the development and targeting of broad-based public health campaigns aimed at young people, particularly given the low level of help seeking and the burden associated with untreated depression in young people.

Keywords: *adolescence, depression, attribution theory, help-seeking, stigma*

The impact of compulsive cleaning on confidence in memory, attention and perception, and on confidence in cleanliness

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This study aimed to examine why compulsive cleaning does not reduce fear of contamination in individuals with Obsessive Compulsive Disorder (OCD). Prior compulsive research suggests that rather than provide reassurance, repeated checking or staring counterproductively produces distrust in memory, attention and perception concerning that behaviour, thereby stimulating continued checking or staring. The current study extends previous research by examining whether the cognitive distrust that occurs following compulsive checking and staring also occurs following compulsive cleaning. This study examined the impact of repeated cleaning on confidence in memory, perception, attention, and cleanliness. Sixty undergraduate psychology students completed a practical cleaning task, a computerised experimental task, and a number of paper-and-pencil questionnaires examining cognitive confidence. Consistent with predictions, repeated cleaning was found to produce distrust in memory and attention for the cleaning behaviour; participants doubted both the accuracy of their recollections, and whether they had maintained attention throughout the cleaning trial. Importantly, the cognitive distrust that results from repeated cleaning was found to generalise to visually similar objects. Results also showed that asking participants to recall the colour of the last dish cued participants to focus on a concrete, salient dimension of the last cleaning trial. This prevented a decline in memory confidence following repeated cleaning. Inconsistent with predictions, repeated cleaning did not reduce confidence in perception or confidence in cleanliness. These findings have important implications as they enhance understanding of the cognitive processes that underlie OCD, and inform treatment practices. Ultimately, these findings are a preliminary step towards improving the quality of life for individuals with OCD.

Keywords: *compulsive cleaning, Obsessive Compulsive Disorder, cognitive distrust*

The impact of conscious regulation of influences in traditional and project virtual teams on their creativity and effectiveness

KOZUSZNIK, B. (University of Silesia), POLLAK, A. (Silesian University of Technology)

Increase of innovativeness and creativity of Polish organizations is a condition of economical growth of the country. The purpose of this research is to identify barriers and chances of intellectual capital use in work-teams – traditional ones and project virtual teams (Pauleen, 2004; Andriessen, 2003). One of the barriers is still the over-use of managers' influence and lack of free space for individual choice and decision (Hertel, Geister, Konradt, 2005). The aim of this contribution is to show the relation between the influence tactics used by managers in traditional and virtual teams and their regulation of influence ability (deinfluence - ability to reduce their influence) with some positive consequences as creativity and effectiveness (Kipnis, Schmidt, 1983; Yukl, Falbe, 1990). Do these teams require different tactics? Is influence regulation of the same importance in traditional and virtual teams? The DEI-beh Scale was used to measure regulation of influence ability (2004), and the Influence Behavior Questionnaire (IBQ) (Yukl, 1994), Team Effectiveness Scale (2004), Team Creativity Scale (2006) were used. Research was conducted in 33 traditional and 35 project virtual teams (each team about 5-10 members). It was confirmed that there is a positive relation between ability to consciously reduce influence (deinfluence) and effectiveness as well as creativity in traditional and virtual teams. The ability of conscious influence regulation seems more important in virtual teams. There are differences in influence tactics used in more creative and effective teams no matter traditional or virtual. More effective virtual and traditional team leaders have higher results in conscious influence regulation ability. The results confirm that there is high time to change leader behaviour toward not only flexible use of influence tactics but also towards influence regulation ability which helps in better use of intellectual capital in traditional and virtual team. Traditional and virtual teams seem no different as far as positive impact of influence

regulation and ability to reduce one's influence is concerned. This ability could be trained and developed in traditional forms and in virtual environment.

Keywords: *innovation, creativity, influence tactics, effectiveness, teams*

The impact of emotional sincerity on leadership effectiveness

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Recent research has highlighted the importance of leaders' emotion expression in influencing followers. However, attention has focused primarily on the effects of the valence of leaders' emotion expression. This paper extends previous research on leader emotion expression by examining how the sincerity of a leader's emotion expression affects followers. The study used a 2 (leader emotion valence: positive vs. negative) x 2 (leader emotion sincerity: sincere vs. insincere emotion expression) between-subjects design. One hundred and twenty undergraduate students were randomly assigned to each of the four conditions. In each condition, participants took part in an online task where they worked under the supervision of an assigned leader over the Internet. In reality, the "leader" was a computer program designed to simulate the appropriate emotion expression. After the task, participants invested money they received from the experiment on their leader who was to manage an organizational leadership crisis (i.e., the more effective the leader in managing the crisis, the more money followers will receive). Lastly, participants reported their perceptions of the leader and their emotional experiences while working with the leader. The sincerity of a leader's emotion expression significantly affected followers' responses to the leader. Particularly, sincere emotion aroused more positive affect in followers. For example, followers experienced more excitement when their leader displayed sincere positive emotion than feigned positive emotion. In addition, sincere emotion induced greater trust in the leader among followers. Lastly, the trust

reported was supported by behavioral measures of leadership effectiveness, which showed that followers were more willing to support leaders who showed sincere emotions. Overall, findings confirm the importance of emotional sincerity in understanding the impact of leader's emotion expression on followers. Feigning both positive and negative emotion can significantly decrease leadership effectiveness.

Keywords: *leadership, emotion expression, followers, leadership effectiveness, emotional sincerity*

The impact of highly complex work and low job decision latitude on employees' emotional and cognitive strain and burnout at an international airport's hub section

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Aim of this study was to investigate stressors that elicit stress reactions among blue-collar workers at an international airport's hub section. Based on the transactional stress model (Lazarus & Folkman, 1986), we developed a theoretical model to explain how work complexity (stressor, respectively 'primary appraisal') and job decision latitude (coping strategy, respectively 'secondary appraisal') affect employees' subjectively perceived emotional and cognitive strain and burnout. The following assumptions were tested: firstly, it was supposed that work complexity is positively related to latitude. Secondly, it was postulated that latitude in turn correlates negatively with perceived emotional and cognitive strain as well as burnout. Thirdly, it was hypothesized that latitude mediates the positive relationship between complexity of work and employees' stress reactions. Stressor and coping strategy were rated in two ways. First, employees evaluated the extent of work complexity and latitude. Second, the same measures were used to rate work complexity and latitude for the investigated workplace from a team of organisational experts consisting of an executive manager, a work and organisational psychologist, an occupational physician, a member of the workers' council and an on-the-

job trainer. Because the sample-size for the self-reported measure was higher, and both measures were highly correlated, we used the self-reported data for further analyses (see Ohly, Sonnentag, & Pluntke, 2006). To test the fit of the proposed model, structural equation models were calculated using longitudinal data ($N = 122$). Results indicated adequate data fit to our proposed model and revealed that work complexity and latitude at time 1 were significantly positively correlated and latitude at time 1 and employees' subjectively perceived emotional and cognitive strain and burnout at time 2 were significantly negatively correlated. In addition, the mediating effect of latitude could be confirmed. Results emphasize that latitude perceived as a possibility to cope with complex work plays an important role in relation to employees' stress reactions. Thus, in line with the transactional stress model (Lazarus & Folkman, 1986), it is important to strengthen employees' job decision latitude to be able to successfully cope with the highly complex work at the hub section of an international airport.

Keywords: *stressors, blue-collar workers, airport, stress reactions, coping strategies*

The impact of intervention on rates of recidivism from a prison based offence specific CBT programme delivered to men incarcerated for sexual offences

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MCDONALD, C. (University College Dublin)

This oral paper will present the results of a study that compared the post-release sexual, violent non-sexual, non-violent non-sexual rates of recidivism for all men in the Republic of Ireland who received an offence-specific cognitive behavioural therapy (CBT) intervention while serving a custodial sentence for a sexual crime, with a matched control group of untreated men. All men ($n = 124$) in the Republic of Ireland who participated in a year-long offence-specific CBT program for sexual offences during their sentence were identified through prison records. A control group of untreated men ($n = 124$) matched on variables of offence, victim characteristics, age, sentence length, and release were also identified. The rates of recidivism for

both groups were identified through official police records of re-conviction and official prison records of re-imprisonment. The results indicated that offence-specific CBT intervention for sexual offending men did not reduce their rates of sexual, violent non-sexual, non-violent non-sexual offending. Due to the limited provision of intervention to sexual offending men in the Republic of Ireland the current study allowed for a high quality match between treated and untreated men. The current study fits with other data from methodologically stronger studies in other jurisdictions that suggest caution is needed in the adoption of findings from large scale meta-analyses that combine data from studies of limited methodology to conclude that sexual offender intervention reduces rates of recidivism.

Keywords: sexual offences, recidivism, cognitive behavioural therapy, men, interventions

The impact of organizational structures, workplace characteristics, and climate features on employees' affective commitment

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Affective Commitment, which deals with employees' emotional attachment to, identification with, and involvement in the organization, is known for its favorable organizational outcomes (e. g. job satisfaction, job performance). Thus, organizations' benefit of affectively committed employees is obvious. Our study targets the antecedents of this construct. How can employers establish affectively committed employees in organizations? Meyer and Allen (1991) proposed that affective commitment can result from three different categories: personal characteristics, organizational structure, and work experience. Past research has focused more on workplace characteristics than on personal or structural features. Thus, relatively few studies exist concerning especially to organizations' structural characteristics. Our study investigates the impact of organizational structures in terms of structurally anchored participation

(organizational democracy), as well as the influence of workplace characteristics in the form of individually perceived participation in democratic decision-making, and the effects of a socio-moral climate on employees' affective commitment. As regards the personal characteristics, we controlled for supervisory function, age, educational background, and tenure. We used a multi-method, cross-level design to examine the proposed interrelations. Based on a typology of democratic enterprises, we surveyed 30 enterprises with different levels of structurally anchored participation in Austria, Germany, and Italy. Using document analyses and structured expert interviews, we collected data on company features. Individually perceived participation in decision-making, the socio-moral climate, and personal characteristics were recorded by questionnaires. With a response rate of 58 per cent, we applied 402 questionnaires for analyses. By means of hierarchical linear modeling, we found support for the impact of structural and workplace characteristics and for the influence of a socio-moral climate on affective commitment. In this context, employees' individually perceived participation in decision-making has the strongest predictive value for commitment. But also a socio-moral climate and structurally anchored participation are significant predictors for employees' commitment. Personal characteristics did not show any predictive value. Summing up, employees are most affectively committed in companies with strong democratic structures and a high level of socio-moral climate if they individually perceive many possibilities to participate in organizational decision-making processes.

Keywords: affective commitment, organizational structures, workplace characteristics, climate, decision making

The impact of perceived organizational supports to employee job satisfaction

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Employee satisfaction and retention have always been important issues. Although there has been contradictory literature regarding this issue, in

general it has been found that satisfied employees tend to be more productive, creative and committed to their employers. Moreover, Harper et al., (2003) also stated that the more satisfied the employee the more cooperative they are. In this regard, job satisfaction can be influenced by a variety of factors, e.g., the quality of one's relationship with their supervisor, the quality of the physical environment in which they work, degree of fulfillment in their work, etc. In this regard, the question arises whether employee satisfaction is influenced by the perception of employee about the organization (by their Perceived Organizational Support. In this regard, Perceived Organizational Support (POS) would increase employees' felt obligation to help the organization reach its objectives. Behavioral outcomes of POS would include increases in in-role and extra-role performance and decreases in corresponding withdrawal behaviors such as absenteeism and turnover, and would also be associated with increased job satisfaction. Based on that, this paper will study the impact of POS to Employee Job Satisfaction (EJS). The benefits of this study is to find variables that have significant contribution to EJS, in order to give feedback to the management about their employee well being. The research is using a quantitative ex post field study design and correlational methods. To collect the data, this study used the modified Employee Satisfaction and Perceived Organizational Support Questionnaire which has been recently modified and validated. A total of 374 employees who worked at a coal mining company in Indonesia were asked to participate in the study. The results show that there is a positive and significant correlation between POS and job satisfaction ($R = 0.778$, $p < 0.01$), and POS has an impact of 60.6 per cent to Employee Job Satisfaction. In conclusion, organizations need to actively support their employees in order to achieve higher Employee Job Satisfaction.

Keywords: *employee satisfaction, employee retention, perceived organisational support*

The impact of persuasive health imagery on health information retention, coping and vulnerability

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Fear is used in health campaigns to elicit health behaviour change. Health models have not been able to explain how individuals respond to fear appeals. There is little empirical evidence to show if health information presented via fear appeals is retained. This study investigated if health knowledge is affected by the presentation of persuasive health imagery. 175 participants from the psychology participant pool ($n = 92$), and the general public ($n = 83$) were presented with health information and allocated into either skin cancer (SC) or smoking related illness (SRI) contexts. Participants were exposed to benign, mild or persuasive imagery relating to each context. Then participants completed the Beck Anxiety Inventory, the Coping Response Inventory and measures of Vulnerability and Susceptibility. Their health knowledge was then tested. No significant difference in health knowledge was found between conditions in either context. However, in the SRI context, smokers had the least amount of health knowledge. In the SC context, those who had visited a skin cancer clinic had less health knowledge. Further, for those whom the health threat was salient perceived themselves as the least vulnerable and used a more avoidant coping repertoire. Health knowledge is not affected by the persuasiveness of imagery relating to the health context. These results suggest that fear appeals may not be the most effective means of communicating health knowledge.

Keywords: *health, persuasive imagery, information retention, coping, fear*

The impact of self-esteem and fear of older people on ageist attitudes towards older people

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Ageist attitudes reflect a prejudice in society against older adults, which is considered to be a

problem within the community and workplace settings. Although research is growing, the current body of literature would benefit from further research into to predictors of ageist attitudes. Therefore, the aim of the following study was to investigate the dual impact of self-esteem and ageing anxiety (i.e. comprising of four factors being: Fear of Older People; Psychological Concerns; Physical Appearance; and Fear of Loss) on ageist attitudes towards older people. This study utilised a cross-sectional design to investigate the impact of self-esteem and ageing anxiety on ageist attitudes towards older people. A total of 321 individuals participated in this study. Two hundred and twenty six of these participants were women (70.4%) and 95 (29.6%) men. Structural equation modeling (SEM) was used to test the causal relationships of the proposed model. Goodness of fit estimates supported the hypothesised model. Investigation of the direct effects identified that low self-esteem and the 'fear of older people' factor of the ageing anxiety scale predicted higher levels of ageist attitudes towards older people. The implications for this study identified that individuals who have a positive self-image are less likely to have negative attitudes towards older people. This is an important finding as it suggests that negative attitudes toward the elderly may be reduced through programs aimed at increasing levels of self-esteem within the population. This study also found a significant relationship between fear of older people and ageist attitudes towards older people. This result supports the role that educational programs play in reducing ageist stereotypes within society. Future research is encouraged to identify the causes of ageing anxiety, as it is likely to provide additional insights into the predictors of ageism, and inform strategies to reduce its effect within the community and workplace settings.

Keywords: *self-esteem, ageist attitudes, prejudice, ageing anxiety, older people*

The impact of self-esteem, situational characterization, and gender on the propensity to initiate negotiation: Implications for lifetime earnings

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This study analyzes the impact of self-esteem (high vs. low), situational characterization ("negotiate" vs. "ask"), and gender on the likelihood an individual initiates negotiation (n = 140). Initiating negotiations for compensation, specifically in one's first job, has a huge impact when factored over a lifetime because an individual's initial salary sets the trajectory for the rest of one's career. The participants were undergraduate students enrolled in a liberal arts college in California during the Fall 2008 and Spring 2009 semesters. Participants were recruited from psychology classes and advertisements posted on campus. A total of 140 students participated in this study including 51 men and 89 women. Self-esteem was primed with a prompt and the participants were told they could either "negotiate" or "ask" for more money after completing two tasks. All participants were offered \$1 and then given the opportunity to initiate a negotiation for up to a maximum of \$5. A main effect of situational characterization was found such that negotiation was more likely in the "negotiate" condition. Neither self-esteem nor gender produced significant results. A significant interaction showed that men were more likely to negotiate in the "ask" condition, but there were no gender differences in the "negotiate" condition. Finally, gender differences in anticipated future earnings were found. Men held considerably higher expectations for average annual salary 5 years after graduating from college than women. Initiating negotiation is a difficult task for most people. Only 36% of participants were willing to request more money, even though they were all explicitly told it was acceptable. Initiating salary negotiations has substantial long-term career ramifications and the results of this study have important implications for training students and workers to negotiate for the salaries they deserve.

Keywords: *self-esteem, situational characterization, gender differences, negotiation*

The impact of work complexity on the relationships between positive and negative affective appraisal and recovery experiences

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of Heidelberg), SONNTAG, K. (University of Heidelberg)

The present study sought to investigate the relationship between affective appraisal in the morning and recovery experiences in the evening among blue-collar workers at an international airport's hub section. Based on the transactional stress model (Lazarus & Folkman, 1986) and the demand-control model (Karasek, 1979), we hypothesized the following assumptions: Firstly, it was assumed that positive affective appraisal is positively related to recovery in the evening. Conversely, we hypothesized that negative affective appraisal in the morning is negatively related to recovery after work. Finally, we assumed that both relationships are moderated by work complexity. Thus, we postulate that employees with negative or positive affective appraisal in the morning experiencing high levels of work complexity show lower levels of recovery after work in comparison to employees experiencing low levels of work complexity. To test these assumptions we conducted a diary study ($N=45$). We assessed employees' perceived work complexity and the control variables age, position and shift system on a person level. Affective appraisal in the morning and recovery experiences in the evening were rated by the participants on 12 consecutive days ($N=406$). We used multilevel analyses (HLM 6, Raudenbush, Bryk, Cheong, Congdon & Du Toit, 2004) to accurately fit the hierarchical data structure. The assumed relationships between positive and negative affective appraisal in the morning and recovery in the evening were confirmed. By applying the described cross-level interaction design, we could also confirm the moderating effect of work complexity on both relationships. As research has shown that recovery fades out quickly after vacations, everyday recovery seems to be crucial for employees' well-being (Westman & Eden, 1997; Zijlstra & Sonnentag, 2006; Rook & Zijlstra, 2006; Sonnentag & Fritz, 2007). The present study highlights the importance to examine how employees affectively appraise the upcoming day in the morning and perceive work complexity regarding their recovery after work. Concluding from this study, we recommend that organizations should support their employees' recovery by either reducing the complexity of

the employees' work or by providing training and coaching to help their employees to successfully cope with their perceived work complexity.

Keywords: *work complexity, affective appraisal, time of day, recovery*

The implications of systematic training for the validity of online ability testing

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Fluid intelligence is critical for a wide variety of cognitive tasks, and it is considered one of the most important factors in learning. Hence, fluid intelligence is a vital construct in aptitude testing. There is a long history of the assumption that fluid intelligence must be simply genetically determined. However, recent studies (see Jeaggi, Buschkuhl, Jonides & Perrig, 2008) have indicated that fluid intelligence can be improved with training. If training improves fluid intelligence, it needs a measure for current psychometric fitness level to determine the true potential of a candidate in aptitude testing. Cognitive training data of participants ($N=12,548$) of a long-term online study is used to identify cognitive aspects that are subject to improvement by training and to aptitude testing. The results indicate that taking into account the cognitive training level is a vital element of test fairness for aptitude testing in general and for online pre-screening in particular.

Keywords: *systematic training, fluid intelligence, aptitude testing, cognitive task, online ability testing*

The importance of anxiety sensitivity as a predictor of anxiety symptomatology in primary school children

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A key factor to be considered when providing intervention for anxious children is anxiety sensitivity. Anxiety sensitivity is essentially the fear of anxiety-related sensations. There is ongoing debate in the research literature as to

whether anxiety sensitivity and the more traditionally recognized trait anxiety are distinct constructs or not. The aim of the present study was to screen a large number of children in the general population for anxiety sensitivity and trait anxiety, and to evaluate anxiety sensitivity as a distinct construct from trait anxiety in predicting anxiety symptoms. Participants included 455 primary school children (241 boys and 214 girls) with a mean age of 9.68 years ($SD = 1.23$). The children completed the Childhood Anxiety Sensitivity Index (CASI); the A-Trait scale of State-Trait Anxiety Inventory for Children (STAIC) and the Anxiety Symptoms Checklist for Children (ASCC). Results indicated that anxiety sensitivity and trait anxiety are similar constructs and that anxiety sensitivity is not easily distinguished from trait anxiety. However, some distinction between the two constructs became apparent as anxiety sensitivity was found to be a reliable predictor of cognitive processes associated with anxiety. Evidence to date may provide some insight into the importance of anxiety sensitivity as a distinct and important factor when examining anxiety in children. The findings of the present study may also have important implications for psychological intervention, and for parents and educators involved in the overall development and well being of anxious children.

Keywords: *primary school, anxiety sensitivity, anxiety symptomatology, trait anxiety*

The importance of perceived workplace difficulties in those with multiple sclerosis in determining work outcomes

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Employment in people with Multiple Sclerosis (PwMS) is of increasing concern. Whilst some previous studies have identified various demographic and disease-related factors that may be involved in determining work outcomes, few have quantitatively examined the potentially important contribution of difficulties experienced by PwMS in the workplace itself. Even if these difficulties have been examined, the inclusion of cognitive difficulties has typically

not been satisfactory. This research seeks to more comprehensively examine workplace difficulties in PwMS and its relationship with employment outcomes and expectations. Participants were 170 PwMS (74% female) of working age ($M=49$ years) who were currently in or no longer in paid employment. Various self-report measures were completed including 123 workplace difficulty items developed through an extensive literature search and expert review. The items were factor analyzed forming the MS Work Difficulties Questionnaire – MSWDQ. A subset of this sample ($N=103$) also completed a short battery of cognitive tests measuring processing speed, immediate and long-term memory, working memory, prospective memory, abstract and verbal reasoning, and planning. Exploratory principal components analysis of the work difficulty items yielded several components with good to excellent internal consistency reliabilities. These included difficulties related to cognition, physical limitations, career progression, support in the workplace, workplace accessibility, home responsibilities, finance, and personal interactions. Using logistic regression analyses, variance accounted for by this model in current employment status and reduced working hours since diagnosis was 22% and 37%, respectively. Variance accounted for in future expectations about withdrawing from work entirely, reducing work hours, and changing type of work was 37%, 32%, and 47%, respectively. Perceived cognitive difficulties accounted for more variance in work outcomes than objective cognitive measures. Perceived workplace difficulties are strong predictors of employment outcomes in people with MS. Since many PwMS leave work within only a few years of being diagnosed, these findings are especially pertinent for the provision of effective vocational and rehabilitation programs.

Keywords: *multiple sclerosis, workplace, cognitive difficulties*

The indirect effect of perceived school climate on adolescents' intergroup attitudes through student relations

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Past research has shown that the way students perceive the school climate does have an effect on their intergroup attitudes (Gniewosz & Noack, 2008; Gniewosz, Noack, Wentura & Funke, 2008; Bovier & Boehnke, 1999; Aboud & Fenwick, 1999). In particular, perceived pressure to perform has been associated with elevated levels of prejudice amongst students whereas the perception of transparency and justice has been associated with higher levels of tolerance. Apart from replicating those relationships, the present study explores how perceptions of the school climate indirectly affect students' attitudes through improving peer relations within the class. A total of 1312 students attending 6th, 8th and 10th grade took part in a questionnaire study measuring their perceptions of different aspects of the school climate and the relationship between students as well as a number of background variables and their attitudes towards foreigners. Data were collected at Thuringian secondary schools in several annual waves over the course of five years. Initial cross-sectional analyses of the data collected at the first measurement point suggests that when age and school track are controlled, the effect of pressure to perform on prejudice against foreigners is mediated by student relations. However, this was only found for students with a relatively low level of identification with the school, whereas for highly identified students the quality of student relations did not significantly affect their level of prejudice. Further analyses will be conducted with regards to other indicators of perceived school climate and potential third variables reflecting student relations within the class room. The direction of causality will be established through the computation of cross-lagged effects across measurement points. The study sheds more light on the relationship between perceived school climate and intergroup attitudes. In particular, it is explored how the school climate affects another important socialization agent, namely peer relationships within the class room. Implications for interventions at the school level will be discussed.

Keywords: *school climate, intergroup attitudes, prejudice, transparency, justice*

The influence of achievement goals and perceptions of learning environment on students' approaches to learning in a university in Hong Kong.

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Deep learning has been shown to enhance better understanding and conceptions of academic materials as well as greater development of generic skills in the higher education. This study aimed at examining how achievement goals and perceptions of learning environment influence students' approaches to learning (deep/surface). With the understanding of the relationships among these three factors, deep learning and favorable learning outcomes can be better enhanced among university students in a Hong Kong Chinese context. In addition, the three factors examined in this study are constructs from two perspectives in the literature: 1) achievement goals (AG) and 2) students' approaches to learning (SAL) perspectives. This study explored the relationships among the constructs from these two perspectives as very limited research has been conducted in this area of integrating models and perspectives in understanding student learning. A survey was conducted to measure achievement goals (Achievement Goals Questionnaire; Elliot & Church, 1997), perceptions of learning environment (Student Course Experience Questionnaire; Ginns, Prosser, & Barrie, 2007) and approaches to learning (Revised Study Process Questionnaire; Biggs, Kember, & Leung, 2001) of 770 university students. A correlation and regression analysis was conducted to investigate the relationships among these three factors. Results show that achievement goals, perceptions of learning environment and approaches to learning were related to one another. Mastery goals, performance-approach goals, perceptions of good teaching and clear goals and standards in the learning environment were positively associated with deep approaches to learning. Performance-avoidance goals were positively associated with surface approaches to learning whereas perceptions of appropriate assessment and appropriate workload in the learning environment were negatively associated with surface approaches to learning. Achievement goals from the AG perspective and perceptions

of learning environment from the SAL perspectives were related to one another. Both achievement goals and perceptions of learning environment influence university students' adoptions of deep and surface approaches to learning. The relationships found between achievement goals and perceptions of learning environment contribute to research and theoretical models in both AG and SAL perspectives in which researchers may consider integrating constructs from both perspectives in understanding and enhancing university student learning in the Chinese context.

Keywords: *deep learning, higher education, achievement goals, perceptions*

The influence of cultural values on mental health: The mediating effect of attitudes towards emotional expression

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Although in the past there have been studies that have discussed the connection between individualist or collectivist cultural values and an individual's mental health, very few studies have attempted to understand whether the individual's attitudes towards his emotional expression can play a mediating role in this relationship. For this reason, the main topics to be discussed in this paper include: 1. From the individual's inclination toward certain cultural values, in accordance with how modern the individual is, cultural values can be classified into four types - namely, vertical/horizontal individualism or vertical/horizontal collectivism - in order to validate the effect of such cultural values on the individual's attitudes towards emotional expression. 2. The influence of the individual's attitudes towards emotional expression upon negative mental health. 3. Whether or not the influence of the individual's cultural values (vertical /horizontal individualism or collectivism) on his mental health is achieved through his attitudes towards emotional expression serving as the mediating effect. This study adopts a two-stage survey involving full-time working adults employed by private enterprises in Taiwan. A total of 300 questionnaires were distributed. At Time 1 (T1), participants were asked to evaluate their

vertical/horizontal individualism and collectivism, and any negative attitudes towards emotional expression. One month later (T2), employees who had completed the first-wave questionnaire were asked to rate their mental health. As a result, we had a final usable sample of 159 working adults, which represented a valid return rate of 53%. These participants consisted of 99 females and 60 males, with a mean age of 36.42 years (*SD*: 7.99), employed in such industry sectors as hi-tech, finance and insurance, business and professional services, traditional manufacturing, medical and government. From the regression analysis, it was discovered that vertical/horizontal collectivism was positively associated with negative attitudes towards emotional expression ($b=.26, p < .01$; $b=.16, p < .05$). In addition, horizontal individualism was negatively associated with negative attitudes towards emotional expression ($b=-.20, p=.01$). Furthermore, this study confirmed that negative attitudes towards emotional expression were positively associated with negative mental health (i.e. somatic symptoms, anxiety and insomnia, social dysfunction and severe depression) ($b=.29, p < .01$; $b =.33, p < .01$; $b =.26, p < .01$; $b=.27, p < .01$). Finally, this study showed that under horizontal individualism and vertical collectivism the predictors of negative mental health (i.e., somatic symptoms, anxiety and insomnia, social dysfunction and/or severe depression) were partially and almost completely achieved through the mediating effect of the negative attitudes towards emotional expression. The results showed that individual's cultural values could be used to predict their mental health indirectly through their attitudes towards emotional expression processes. Within the collective cultural environment of the Chinese peoples, the overall atmosphere is one where people are not encouraged to express their emotions, especially where those emotions are negative. The burden of emotional pressure built up over the long run is actually not favorable to the development of physical and mental health. The road to improvement, apart from the nurturing of individualistic cultural values, requires the development of another set of coping strategies that are suitable for the enhancement of the physical and mental health of social groups among the Chinese.

Keywords: *cultural values, attitudes, emotional expression, Chinese*

The influence of internalization of emotional regulation on mental health: The moderating effect of leader-member exchange

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King and Emmons (1990) proposed that ambivalence regarding withholding the expression of emotion, rather than inexpressiveness *per se*, is what fosters ill-being, and Katz and Campbell (1994) and King and Emmons (1990) found that ambivalence to be positively associated with self-reported physical symptoms, the number of visits to health-care providers, and depression. This study explores whether self-regulation by withholding negative emotions (SRWNE) affects mental health, and examines further whether Leader-Member Exchange (LMX) can moderate the relationship between such self-regulation and employee mental health. This study adopts a two-stage survey whose participants were full-time working adults employed by private enterprises in Taiwan. A total of 400 questionnaires were distributed. At Time 1 (T1), participants were asked to evaluate their self-regulation by withholding negative emotions (SRWNE), LMX, and demographic variables. One month later (T2), employees who had completed the first-wave questionnaire were asked to rate their mental health. The final usable sample was 284 working adults, representing a valid return rate of 71%. These participants consisted of 163 females and 121 males, with a mean age of 37.22 years (*SD*: 9.69), employed in such industry sectors as hi-tech, finance and insurance, business and professional services, traditional manufacturing, medical and government. External regulation of SRWNE was significantly associated positively with somatic symptoms ($\beta = .29$; $p < .01$), anxiety and insomnia ($\beta = .29$; $p < .01$), and social dysfunction ($\beta = .22$; $p < .01$), whereas introjected regulation of SRWNE was significantly associated positively with somatic symptoms ($\beta = .12$; $p < .05$) and severe depression ($\beta = .15$; $p < .05$). In addition, identified regulation of SRWNE was significantly

associated negatively with anxiety and insomnia ($\beta = -.17$; $p < .01$) and social dysfunction ($\beta = -.23$; $p < .01$), whereas integrated regulation of SRWNE with anxiety and insomnia ($\beta = -.16$; $p < .01$). This means that subordinates who used controlled SRWNE had poorer mental health than subordinates who used autonomous SRWNE. This study also found that LMX may moderate the relationship between such self-regulation and employee mental health. External regulation times the LMX's interaction was significantly associated with anxiety and insomnia ($\beta = -.13$; $p < .05$), whereas identified regulation times the LMX's interaction was significantly associated with social symptoms ($\beta = -.19$; $p < .01$). In addition, integrated regulation times the LMX's interaction was significantly associated with anxiety and insomnia ($\beta = .13$; $p < .05$), social symptoms ($\beta = -.20$; $p < .01$). The results support our hypotheses that not only external and introjected SRWNE are significantly associated positively with negative mental health, in line with Kim et al.'s (2002) findings that controlled SRWNE is significantly correlated positively with such psychosomatics as anxiety, somatic symptoms, depression, negative affect and immune dysfunction, but also that identified and integrated SRWNE are significantly associated positively with negative mental health. Therefore, ambivalence about not expressing emotion, rather than inexpressiveness *per se*, is what fosters ill-being. This assertion is not only supported by Western studies (Katz & Campbell, 1994; King & Emmons, 1990; Kim, et al. 2002), but is also by this study based on a Chinese sample, leading to the conclusion that the extent of the internalization of emotional regulation has universal value for both mental and physical health. However, this study showed that LMX could moderate the relationship between the autonomous and controlled extent of subordinates' emotional regulation and the mental health.

Keywords: *emotions, ambivalence, self-regulation, leader-member exchange, mental health*

The influence of LMX on subordinate's job satisfaction, organizational citizenship behavior, and counterproductive work behavior: The moderating effect of person-supervisor fit

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Although in the past there have been studies that have discussed the connection between Leader-Member Exchange (LMX) and subordinate's job satisfaction, organizational citizenship behavior (OCB) and counterproductive work behavior (CWB), very few studies have attempted to understand whether the person-supervisor fit can play a moderating role in this relationship. This study adopts a two-stage survey whose participants were full-time working adults employed by private enterprises in Taiwan. A total of 450 questionnaires were distributed. At Time 1 (T1), participants were asked to evaluate their LMX, person-supervisor fit, and demographic variables. One month later (T2), employees who had completed the first-wave questionnaire were asked to rate their job satisfaction, OCB, and CWB. As a result, we had a final usable sample of 287 working adults, which represented a valid return rate of 64%. These participants consisted of 313 females and 74 males (mean age: 37.05 years; *SD*: 9.44) employed in such industry sectors as hi-tech, finance and insurance, business and professional services, traditional manufacturing, medical and government. We tested hypotheses through the use of hierarchical multiple regression. The results showed that LMX was significantly associated positively with job satisfaction ($b = .42, p < .01$) and OCB ($b = .38, p < .01$), and significantly associated negatively with CWB ($b = -.37, p < .01$). The study also found that person-supervisor fit may moderate the positive relationship between LMX and OCB ($b = .18, p < .01$), and the negative relationship between LMX and CWB ($b = -.13, p < .01$). As we know, supervisors choose those they like or view as strong performances into the "in-group" and those they dislike or view as weak performances into the "out-group". People in "in-group" are able to utilize more resources, enabling them to

do the task better and gain a sense of accomplishment and obtain more support and trust. According to Pool's (1997) research, he defined job satisfaction as an attitude that individuals maintain about their job which is developed from their perceptions of their job. The quality of the LMX relationship between subordinates and the supervisor will determine job satisfaction of subordinates. Our results are consistent with previous studies on LMX and Job Satisfaction (Ekin & Terri, 2006). In addition, subordinates experiencing high quality LMX with their leader were found to have better attitudes and felt constructive for the organization, finding supervisors to be supportive. In turn, these subordinates respond with more extra-role behaviors, showing more OCB. Further, a negative relationship was found between LMX and CWB, whereby subordinates experiencing high quality of LMX received better resource and more trust from their leader than the "out-group" member, and felt that they were important in his or her organization. Therefore, they will not to damage their organization. In addition, we showed that person-supervisor fit can moderate the positive relationship between LMX and OCB, where this relationship was stronger among subordinates who had higher person-supervisor fit than among those who had less person-supervisor fit. We also found that person-supervisor fit can moderate the negative relationship between LMX and CWB, where the relationship was stronger among subordinates who had higher person-supervisor fit than among those who had less person-supervisor fit. In sum, if organizations wish to enhance the employees' OCB or reduce their CWB in the future, we suggest that they select job applicants who share the values and visions of the supervisors.

Keywords: *leader-member exchange, job satisfaction, organizational citizenship behavior, counterproductive work behaviour, person-supervisor fit*

The influence of organisational attitudes on Australian airline pilot decision choices

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The decisions commercial airline pilots make have far-reaching implications for the safety of many people. Organisational attitudes have been shown to correlate with riskiness in decision making. However, the nature of this relationship remains to be fully explored. This paper aims to investigate the relationship between organisational attitudes, cue saliency within situational awareness, and resulting decision choices in Australian commercial airline pilots. It was hypothesized that pilot decision choices would change depending on the situational cues to which pilots paid most attention when making a decision. Further, it was hypothesized that this situational cue saliency would be informed by the pilot's organisational attitudes. One hundred and sixteen commercial airline pilots from three different airlines in Australia completed a purpose-designed questionnaire. The questionnaire presented a number of in-flight scenarios; pilots were asked what they would do in the situation and then asked to assess the riskiness of their decision and provide information on the key factors informing their decision choice. A series of regression analyses were conducted and support found for a relationship between attitudes towards management and situational cue saliency ($\beta = -.247, p = .010$), and for a relationship between situational cue saliency and riskiness of a decision choice ($\beta = -.271, p = .006$). No significant relationship existed directly between attitudes towards management and riskiness of decision choice. These findings indicate that, consistent with hypotheses, organisational attitudes influenced decision choice via the mechanism of cue saliency within situational awareness. Attitudes are a powerful motivational contributor to decision choices. Pilots, airlines, and air safety regulators should be alert to the influence that organisational attitudes may have on a pilot's situational awareness, cues attended to, and the resulting decisions made concerning both safety and commercial operations

Keywords: *commercial airline pilots, risky decision-making, situational cues, organisational attitudes*

The influence of perceived organisational support, autonomy and empowering leadership on affective organisational commitment: The mediating role of engagement

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The aim of this research was to assess the influence of perceived organisation support (POS), autonomy and empowering leadership on affective organisational commitment and to assess the possible mediating effects of engagement on these relationships. Participants ($N = 115$) were recruited from a large government organization. Participants voluntarily responded to an online survey. Results from a multiple hierarchical regression analysis suggested that perceived organisational support, autonomy and engagement had direct associations with affective commitment, however not so for empowering leadership. Engagement was found to partially mediate the influence of perceived organisational support and autonomy on commitment. Furthermore, perceived organisational support and autonomy were found to mediate the influence of empowering leadership on engagement. The results from this study corroborate previous research suggesting that affective commitment is likely to have a significant association with POS, autonomy and engagement. While demographic and dispositional variables did not impact the relationship in a significant way, they should still be considered in future research. The results extend existing research by recognising the mediating influence of POS and autonomy on the relationship between empowering leadership and affective commitment. Moreover, they provide more evidence for the mediating influence of engagement on the influence of POS and autonomy on affective commitment. As such, results suggest that those who perceive support from their organisation, who have self determination about how they complete their work, who experience empowering leadership and who are engaged in their role are likely to be more affectively committed to their organisation. This commitment has benefits for both the employee and the employer and remains an area worthy of on-going research.

Keywords: *organisation support, autonomy, leadership, commitment*

The influence of social environment on the resilience of children

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In China, a greater number of peasants have migrated from the countryside to the urban areas in search of better-paid jobs to support their families since the 1990s. Some take their children with them, while others leave their children behind. As a result, two special groups come into being, called "the rural left-behind children" and "the city of floating children" (because their parents often move to other cities). They have already displayed high-risk behavior and exerted adverse impact on themselves and the society. Helping them to develop their talent and strength can be an effective intervention. Under the circumstances, this paper focuses primarily on the resilience of these children. There is a sample of 1577 students aged 10-18 (13.26 ± 2.06) years old from Sichuan province and Beijing, including 902 the rural left-behind children (SS1) and 675 the city floating children (SS2). Scale (California Healthy Kids Survey Resilience Assessment Module), interview and nomination by teachers as well as classmates for SS' interpersonal relationship and behavior in class are used. Controlling such factors as SES, parental relationship and education attainment, the results show that SS2 have lower resilience than that of SS1 on both external assets ($t=7.26$, $p=0.000$) and internal assets ($t=6.51$, $p=0.000$). Furthermore, both the male ($t=5.38$, $p=0.000$) and female ($t=5.36$, $p=0.000$) of SS2 have lower scores on resilience. In addition, findings from our interview and nomination (analyzed by Bootstrap method) show that SS1 have more harmonious relationship with their teachers and classmates than SS2 ($\chi^2=9.56$, $p=0.002$; $\chi^2=4.28$, $p=0.038$), and SS2 have more chance to be nominated for bad behavior in class by teachers ($\chi^2=4.37$, $p=0.036$). Results of the regression analysis show that such factors as emotion, self, coping and personality all contribute to the resilience of children ($\Delta R^2=0.35$). (1) the

external environment (especially, being discriminated against and moving frequently) has more powerful influence on the children's resilience than family factors, which means that the resilience is probably neither in one's personality nor acquired by inheritance; (2) there are many common factors, in particular, the anxiety, sensitivity, self-esteem, positive coping, and extroversion, which impose on both the external and internal resilience; (3) the girls present the higher resilience than boys on both SS1 and SS2.

Keywords: *social environment, resilience, coping Strategies, gender*

The influence of teacher efficacy, work motivation, and mood on teaching innovation

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What contributes to teaching innovation? Many studies suggested that teacher efficacy, work motivation, and emotion or mood were critical teachers' personality factors to influence teaching and learning. Teacher efficacy includes two components: general teaching efficacy and personal teaching efficacy. Work motivation also has two aspects: intrinsic motivation and extrinsic motivation. Mood includes positive mood and negative moods. Studies showed that all of aspects of teacher efficacy, motivation, and mood were related to creativity and innovation. But what different influences these personality factors have on teaching innovation remains unclear, due to limited research. Therefore, this study aims to explore this question. The teaching innovation questionnaire, the teacher efficacy questionnaire, work motivation questionnaire, and mood scale were administered to 322 teachers of middle school. There were 123 male teachers, and 199 female teachers, with length of teaching history ranging from 2 to 33 years. The results of this study indicate that personal teaching efficacy, intrinsic motivation, and positive mood correlated with teaching innovation positively. The regression effect of personal teaching efficacy and positive mood to teaching innovation were significant. The

regression effect of intrinsic motivation and positive mood to personal teaching efficacy were significant. The path analysis showed that the personal teaching efficacy influenced the teaching innovation directly, where the path coefficient of personal teaching efficacy to teaching innovation was significant. Intrinsic motivation and positive mood influenced the personal teaching efficacy directly, where the path coefficient of intrinsic motivation and positive mood to the personal teaching efficacy was significant. The results suggested personal teaching efficacy, intrinsic motivation, and positive mood were all critical factors that influenced teaching innovation. Personal teaching efficacy influenced the teaching innovation directly; intrinsic motivation and positive mood indirectly influenced the teaching innovation by influencing personal teaching efficacy directly.

Keywords: *teaching, Teacher efficacy, work motivation, emotions, mood*

The influences of basic needs, social support and migration on mental health in South Sudan: Implications for humanitarian practice in post-conflict settings

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The project explored the influences of basic needs, like shelter, access to food, water and employment, social support and migration on mental health amongst the southern Sudanese. It investigated mental health differences between gender and two groups: A "host" group representing people who never left south Sudan during its 21-year war; and a group of "returnees" who lived in asylum but had recently returned. The project also explored cultural perceptions of mental illness. Participants comprised 53 adults living in South Sudan. Interviews with host ($n=26$) and returnee groups ($n=27$) were conducted in local language. Measures included demographic data for basic needs, the Perceived Social Support Scale (Procidano & Heller, 1983), the Harvard Trauma Questionnaire and the Hopkins Symptom Checklist-25 (Mollica et al., 2004). An interview

schedule based on the DSM-IV-TR Cultural Formulation was used to collect qualitative data. Returnees reported better access to basic needs and higher education compared to the host group, but this did not equate to greater employment. There were no significant differences for symptoms of PTSD, depression or anxiety between the host and returnee groups. Higher age and social support were significant protectors against mental illness, as was longer periods of time living in asylum. Returnee group data revealed that the longer they had resettled in their homeland, the higher symptoms of mental illness were reported. Women experienced significantly more symptoms of mental illness than men. Qualitative themes indicated that basic needs and social support were directly linked to cultural views about mental illness. Research implications suggest humanitarian practice needs to continue focusing on gender specific programming. Social support programs, in addition to provision of basic needs, appear to be vital in protecting mental health. Humanitarian activities would benefit returnees more by undertaking longer term resettlement programs. The results also provide empirical data supporting classic theories, like Maslow's well-being needs, and the recently published IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings, which advocates for humanitarians and mental health services to shift away from its emphasis on trauma in post-conflict settings.

Keywords: *basic needs, social support, migration, South Sudan, mental health*

The internal structure of counterproductive work behaviors: A meta-analysis

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The overall objective of this research is to comprehensively and quantitatively integrate, by means of structural meta-analysis, existing empirical evidence on all types of Counterproductive Work Behaviors (CWB). This should contribute to a better understanding of

the appropriate level of parsimony in explanations of CWB as well as to clarify the number and content of facets of CWB. The present project employs structural meta-analysis, a combination of psychometric meta-analysis with structural equation modeling. A comprehensive literature search was conducted to identify relevant published articles, conference presentations, and unpublished papers from researchers in the field. One hundred and sixty-seven codable papers were obtained and each was coded twice in order to ensure accuracy. Correlations obtained were corrected for unreliability and weighted by sample size in accordance with Hunter and Schmidt's (2004) recommendations. Subsequently, a confirmatory factor analysis (CFA) was conducted based on this correlation table following Viswesvaran and Ones's (1995) methodology. We first analyzed the data within the Gruys and Sackett (2003) CWB framework and found positive correlations between all forms of deviance (e.g., $\rho=0.40$ for theft and drug use, $k=8$; $\rho=0.54$ for inappropriate verbal actions and misuse of time and resources, $k=8$). Second, we tested alternative models of the internal structure of CWB (e.g., Bennett & Robinson, 2000; Spector et al., 2006) by means of CFA. These results, along with moderator analyses, will be discussed in detail at the conference. CWB has received substantial empirical attention by researchers in various fields. Unfortunately, because these researchers typically work independently in building and testing theory, an integrative and comprehensive understanding of this phenomenon has yet to be obtained. Our results suggest that the widely available models of CWB may be inadequate for classifying behavior. Modifications to existing models will be offered at the conference.

Keywords: *counterproductive work behaviour*

The irrelevant sound effect beyond serial recall performance

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Within working memory research a great deal of attention has been devoted to one well-known phenomenon referred to as the Irrelevant Sound Effect (Beaman & Jones, 1997). Basically the phenomenon is best described as a significant impairment of verbal short-term memory performance during presentation of even low-intensity background noise - usually speech. The phenomenon is considered to be of great practical importance since extraneous speech and noise are known to be amongst the most often-mentioned sources of disturbance in open-plan offices (e.g. Banbury & Berry, 2005; Bradley, 2003; Rashid & Zimring, 2008; Sundstrom, Town, Rice, Osborn & Brill, 1994). It is assumed that measures of improvement within open-plan offices can be derived from the knowledge about factors the Irrelevant Sound Effect depends on and that the productivity of companies can be improved by applying these measures. However, types of cognitive activities in offices vary depending upon the specific demands of the job. The relevance of the Irrelevant Sound Effect to real life office tasks may be questioned since the phenomenon has mostly been tested using the immediate serial recall paradigm exclusively. The aim of the reported experiments is therefore to investigate whether the Irrelevant Sound Effect generalizes beyond serial recall performance. A series of laboratory experiments investigates whether the Irrelevant Sound Effect can be generalized to tasks operationalizing text comprehension or paired associate learning. Tasks operationalizing text comprehension prove to be sensitive towards impairment by background sound but only if background sound is semantically meaningful. Long term paired associate learning also tends to be impaired only if background sound is semantically meaningful. The reported experiments prove that the Irrelevant Sound Effect cannot be easily extended to tasks that go beyond serial recall. The pattern of results depends on the experimental task at hand. The results are clearly contradictory to the findings on the Irrelevant Sound Effect as semantic content is not considered important for the phenomenon to arise. The implications of these results for theoretical modelling and the practical relevance of the Irrelevant Sound Effect must be discussed.

Keywords: *irrelevant sound effect, serial recall performance, semantically meaningful*

The limitations of psychological predictors of xenophobia in South Africa

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Xenophobic attacks against African non-nationals have occurred for many years in South Africa. However, the scale and viciousness of the outbreak of violence in May 2008 was exceptional. This violence left scores dead, hundreds wounded and thousands displaced. An important question is why did the attacks occur at this time and in those particular locations? Integrated Theory (ITT) (Stephan & Stephan, 2000) is the social psychological theory that has most commonly been used to understand xenophobia. It proposes certain threat factors (realistic and symbolic threats, negative stereotyping, intergroup anxiety and interaction experiences with the target group) are primary in explaining negative feelings and attitudes towards foreigners. This paper reports a study applying ITT in South Africa in the year prior to these attacks. Using these results, the paper will question whether the emerging factors provide an insight into the igniting factors of the May attacks. A sample of 345 South African respondents completed a questionnaire which measured the variables proposed by ITT. The sample consisted of black, white, coloured and Indian South Africans. The socio-economic levels and living circumstances of these groups still reflect the inequities of South Africa's apartheid past. Two measures of prejudice towards African immigrants were used – affective prejudice which measured aversive feelings, and social distance, which measured the desire to avoid contact. These measures were separately regressed on the threat variables. The ITT model explained a significant amount of the variability of both prejudice measures. Realistic threats emerged as the strongest determinant of negative attitudes. This suggests that changes in the material circumstances in the country should have been the major igniting factor. However, the detailed analysis of the 2008 attacks produced for the International Organization for Migration (Misago, Landau & Monson, 2009) indicates that

this hypothesis is not fully supported. The psychological variables proposed by ITT may help understand the backdrop of xenophobia, but the factors that lead from attitudes and perceptions to action are more complex.

Keywords: *Xenophobic attacks, South Africa, Integrated Threat Theory, threat*

The longer they stay, the less talented they perceive they are: A profile of perceptions of talent in one Victorian secondary girls school

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Gardner's theory of multiple intelligences suggests a possible nine talents emerge by or during secondary school age. To date little research has effectively measured multiple intelligences or talents of Australian adolescents. The first aim of this research was to apply a recently developed measure of talent based on various approaches to learning and engaging in talents. The second aim of this study was to investigate female student's perceptions of their talents from a developmental perspective. A cohort of female adolescents from 11 to 18 years of age ($n= 325$) completed a questionnaire used to measure talent. Each respondent self-reported on a measure of nine talents. Each talent was rated on seven approaches to learning and engagement. Students' talents scores were profiled using a cluster procedure and two distinct and significantly different groups emerged: a less talented and a highly talented group. The low talent group ($n= 169$) was significantly lower rating than the high group ($n= 156$) although the magnitude of the difference was small. There was no difference by age for language and communication and social and leadership talents. Older students (11-14 years; $n= 174$) rated themselves higher on self-awareness. On the other six talents, significant and weak effects were found showing that older students (15-18 years; $n= 151$) rated themselves lower than younger students. The findings are discussed in reference to the theory of multiple intelligence and the secondary school experience of females.

Keywords: *talent, secondary school, multiple intelligences, learning*

The lost individual: On the structure of personality at the within- and between-person level of analysis

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There is a strong reliance in organisational psychology on between-person analyses; however, between-person analyses provide surprisingly little insight into the psychological functioning of the individual (Borsboom, Mellenbergh, & Heerden, 2003). Taking a within-person perspective on personality in the work place this paper investigates whether the negative neuroticism-conscientiousness relationship observed in between-person studies is purely a description of differences between individuals, or whether it also characterises the internal psychological structure that individuals possess. Employing an experience sampling methodology, over several weeks 115 mid-level managers from large Australian companies were assessed multiple times a day. Within- and between-person variation in personality indicators was analysed using hierarchical linear modeling. Findings indicate that analysing personality as a within-person phenomenon reveals information not captured by the trait approach. While conscientiousness and neuroticism were negatively correlated at the between-person level, this relationship was reversed at the within-person level. Results are discussed in terms of the distinctness of the within- and between-person structure of personality. Applications for the field of organisational psychology are considered, with a focus on the adaptiveness of neuroticism and conscientiousness.

Keywords: *between-person analyses, between-person studies, personality, conscientiousness, neuroticism*

The mechanisms of mindfulness

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An increasing number of therapeutic modalities including CBT, DBT and ACT have moved to embrace and incorporate mindfulness-based practices into their treatment regimes. Whilst Mindfulness and meditation may well be of benefit to the therapist, possibly strengthening their allegiance to their therapeutic modality and thereby contributing indirectly to the therapeutic alliance, are they in and of themselves directly efficacious as therapeutic practices? Is mindfulness a state of being or a way of doing (non-doing) and what implication does this have for practice? Whilst there is now a considerable body of evidence suggesting that the therapeutic use of mindfulness leads to positive client outcomes, far less has been written on how this works. What are the specific mechanisms, processes and procedures of mindfulness that have been shown to be effective? Do psychologists, counsellors and psychotherapists need to practice and therefore embody mindfulness in order to use it effectively or can it be applied as a therapeutic technique? Further, are there particular client populations or issues that have been shown to benefit from mindfulness-based interventions? What are the risks and contra-indications for mindfulness-based practices? This paper attempts to answer these questions by undertaking an integrative meta-synthesis of the literature on relevant therapeutic outcome studies, proposes a model explaining the mechanisms of mindfulness and concludes by discussing the practical implications for psychologists, counsellors and psychotherapists interested in incorporating mindfulness into their practice.

Keywords: *mindfulness, therapy, meditation*

The mediating effect of employee engagement on organizational support, communication, job satisfaction and productivity

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This mediation study aimed to gain further understanding employee engagement, looking into organizational factors such as organizational support and communication as antecedents and how it affects employee performance as reflected on job satisfaction and productivity.

With 285 permanent employees from various organizations, a multiple survey questionnaire was administered which measure job and organizational engagement as well as antecedents (i.e., organizational communication and perceived organizational support) and consequences of employee engagement (i.e., job satisfaction and perceived employee productivity). Data were analyzed using structural equation modeling. The proposed model suggests an acceptable fit based on GFI (.922), CFI (.923), and TLI (.808). Although chi-square (65.567, $df=6$, $p=.000$), AGFI (.727), and RMSEA (.190) says otherwise. This implies that the model may still be improved through the inclusion of other variables related to employee engagement. Results further revealed that employee engagement fully mediates the relationship of organizational communication and perceived organizational support with job satisfaction and perceived employee productivity. This result implies the ability of both job and organizational engagement to influence employee's job satisfaction and perceived employee productivity. It further points out the critical role of the organization through communication and support in influencing employee engagement, thus promote positive employee performance.

Keywords: *mediation, employee engagement, organizational support, job satisfaction, productivity*

The mediating mechanism of women entrepreneurs' self-efficacy on entrepreneurial decision-making in China

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The purpose of this study was to explore the mediating mechanism of women entrepreneurs' self-efficacy on entrepreneurial decision-making in China. In a longitudinal field experiment (approximately 5 months), the study found that the positive impact of entrepreneurial self-efficacy was enhanced by women entrepreneurship development training and significantly related to entrepreneurial decision-

making. The sample included 100 women entrepreneurs in China. Results indicated that women entrepreneurial self-efficacy played a positive mediating role on entrepreneurial decision-making. It is expected that (1) Higher levels of women entrepreneurial self-efficacy (WESE) will result in higher levels of entrepreneurial decision-making; (2) WESE will be moderated in its impact on women entrepreneur emergence and entrepreneurial decision-making by the extent to which the WESE matches the demands of the task and the context in which the women entrepreneur is embedded; (3) Higher levels of women entrepreneurial thought efficacy are expected to result in higher levels of entrepreneur development, emergence and efficient entrepreneurial decision-making. The authors discuss practical implications on women entrepreneur development and directions for future research.

Keywords: *women entrepreneurs, self-efficacy, decision making, training*

The Mental Health Professionals Network workshops: State and learnings

NICHOLAS, A. (Mental Health Professionals Network (MHPN))

The Mental Health Professionals Network is a national project funded by the Department of Health and Ageing. The project aims to improve patient outcomes in primary mental health care by fostering improved interdisciplinary collaboration. This paper will report on the state of the project at the time of writing, and what MHPN has learned about fostering interdisciplinary collaboration throughout the project. The project was funded to achieve its aim of fostering interdisciplinary collaboration by running 1200 interdisciplinary workshops over a two year period. These facilitated workshops target psychologists, psychiatrists, general practitioners, mental health nurses, mental health social workers, pediatricians and mental health occupational therapists and aim to be the starting point for an ongoing, sustainable interdisciplinary mental health clinical networks. The workshops include time for interdisciplinary networking, case study

discussion, and an opportunity to discuss whether the group would like to continue to meet as an interdisciplinary mental health network and to make initial arrangements for the subsequent meeting. The workshops are administered by four MHPN project teams responsible for the workshops in two states. This paper will report on the number of MHPN workshops that have been run in all states and territories of Australia, the number of attendances by each profession, as well as a profile of MHPN facilitators. The challenges that have been met in running this interdisciplinary project will also be reported. MHPN has been operating since September 2008 and will continue to operate until October of 2010. In this time the project has run hundreds of workshops in all states and territories of Australia involving thousands of participants from a number of mental health professions. The project has encountered a number of challenges in moving towards its aim of improving patient outcomes in primary mental health care by fostering improved interdisciplinary collaborative care. The learnings of this project can make a valuable contribution to other interdisciplinary programs.

Keywords: Mental Health Professionals Network, interdisciplinary collaboration, primary care providers

The Mental Health Professionals Network: Creating sustainable interdisciplinary mental health networks

NICHOLAS, A. (Mental Health Professionals Network (MHPN))

The Mental Health Professionals Network (MHPN) aims to improve patient outcomes in the primary mental health care sector through the promotion of interdisciplinary collaborative care. This national, Department of Health and Ageing funded project, is funded to deliver 1200 interdisciplinary workshops over a two year period, with the long term aim of creating interdisciplinary mental health networks across Australia. This paper will report on the processes used to create these sustainable networks, the number and geographical distribution of these networks, and provide some vignettes on the

types of networks created and their activities. MHPN's four project teams create interdisciplinary mental health workshops that aim to bring together psychologists, psychiatrists, general practitioners, mental health nurses, mental health social workers, pediatricians and mental health occupational therapists who work in a similar geographical area, or specialty clinical field. These workshops offer the opportunity for interdisciplinary networking, case study discussion with a focus on collaborative care, and provide a forum to discuss the creation of an ongoing interdisciplinary mental health network. MHPN can provide administrative support and \$500 of funding to each ongoing network. MHPN interdisciplinary mental health networks have been created in all states and territories of Australia. These networks vary in their membership, purpose and activities. This paper will report on the number and geographical spread of these networks, the professions that make up their membership, and the activities undertaken in the network meetings. Vignettes of a small number of networks that outline the process of their formation, their overarching purpose, and their activities will be reported. MHPN aims to create sustained interdisciplinary mental health networks that allow mental health professionals a forum in which they can discuss various facets of collaborative mental health care. This is done through the creation of initial, fully-resourced interdisciplinary workshops that provide an opportunity for the participants to continue to meet as an ongoing network, and ongoing administrative and minimal financial support. MHPN has encountered many challenges and learned much about the process of creating these sustained networks that may be useful to communicate to other mental health care projects and services.

Keywords: Mental Health Professionals Network, interdisciplinary collaboration, mental health care

The mental representation of rearward traffic in visuo-spatial working memory during lane changing

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The goal of the study is to examine processes involved in holding information about rearward traffic in working memory. It was proposed that rearward traffic information (rather spatial), should interfere most with spatial tasks. The more dynamic rearward traffic is in terms of higher speed, the more dynamic the mental representation of rearward traffic should be, and the more it should interfere with the dynamic version of secondary tasks. A driving simulator study was conducted where 30 participants carried out lane changes with rearward traffic in the target lane. Before lane change preparation, participants memorized one of five secondary tasks (visual-static, visual-dynamic, spatial-static, or spatial-dynamic, phonological). After lane change execution, they were asked to recall the memorized material. Dependent variables were driving task performance, percentage of correct secondary tasks, and glance behavior to the left outside mirror. All secondary tasks were calibrated in a pilot study with 22 participants to be similar in difficulty. All visuo-spatial secondary tasks interfere with the preparation to a certain extent. This was measurable in the secondary task performance and in the glance behavior, but not in the driving-task's parameters. In contrast to the hypotheses, results indicate that information about rearward traffic interfered most with visual tasks. Nevertheless, the more dynamic version of the visual task (visual-dynamic) interfered more in the condition with the faster rearward traffic, in contrast to the spatial-dynamic task. A possible explanation for the contradictory results could be that the driving scenario was too easy and predictable so that participants memorized information about rearward traffic more in terms of a picture (car vs. no car) and not a dynamic object in space. However, the dynamic of the rearward traffic is reflected in the results. Follow up studies should work with a more dynamic and less predictable driving scenario.

Keywords: working memory, rearward traffic information, visuo-spatial tasks, mental representation, performance

The passport problem: Trying to improve the ability of experienced operators to determine whether the image in a photo-ID document is of the bearer

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It is critical to national security that we can determine the identity of people crossing national borders. This is usually achieved by comparing the traveler to the appearance of a photograph contained in a photo-ID document such as a passport. However, previous research has shown that the task of deciding whether two images are of the same unfamiliar person is more difficult and error prone than usually realized. We call this the passport problem. We are investigating methods to increase the accuracy with which human operators can match images of unfamiliar faces and have developed several new image formats which improve performance in the laboratory. In this study we present the results of a first attempt to test one of these formats in a more realistic setting with expert operators. A total of 30 people participated, all of whom worked in positions which required them to check the validity of passports by comparing the photograph to the appearance of the bearer. The participants completed a standard test of face matching (The Glasgow Face Matching Test; GFMT). Each participant then sat at a desk and was approached by a series of "customers". The participants were required to determine whether the customer was the person shown on a computer screen in front of them. Decision accuracy and latency were recorded for an average of 54 trials per participant. In about half the trials the photograph was of the customer while in the other trials it was of another person. Half of the trials involved a comparison to a conventional photograph and half to a modified image which presented an average of several different images of the subject. In laboratory testing these average images result in slightly improved recognition compared to normal photographs. Despite the limited number of customers and photographs available for use in the study, and the level of experience of the participants, many errors were recorded. On average participants made errors on about 10% of trials when comparing a photograph to a live target. Performance on the GFMT was comparable to other populations, and showed large individual differences but was not

correlated with performance on the photo-to-live comparison task. Performance was not enhanced by the use of average images compared to standard photographs. The study demonstrates that the passport problem is not eliminated by experience or simple training: performance in this realistic task was surprisingly error prone. Contrary to our expectations, the use of average images did not improve performance. Possible reasons for this finding will be discussed. These results emphasize the need for further research in this field in order to maximize the ability of security staff to detect identity fraud.

Keywords: recognition, national security, photo-ID, passport problem, accuracy

The positive and negative consequences of emotion regulation in nursing

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As indicated in a prior qualitative study, embedded within the work role of nurses is the chronic need to regulate one's emotions when interacting with patients and their families. Given the problems in attracting and retaining nurses, it is important to develop our understanding of the intricate emotional processes involved in performing this work so as to create a work environment conducive to promoting the, health, well-being and development of nurses. The aim of this study was to examine the relationships between different emotion regulation strategies and resultant levels of exhaustion, fatigue and recovery on a day to day basis. 30 nurses from a range of specialties completed a 'tick box' diary after six individual shifts indicating: details of a specific patient interaction; specific emotion regulation strategies employed in relation to the interaction; levels of emotional exhaustion and subjective fatigue; and finally how well they recovered after their shift. A multi level analysis was conducted to examine the specific relationships between emotion regulation strategies and how well they predicted emotional exhaustion, subjective fatigue and recovery at the end of each day. Results

indicated a pattern of adaptive emotion regulation strategies that lead to lower levels of exhaustion and fatigue and to better recovery each day. Additionally maladaptive strategies were identified that were linked to higher daily levels of exhaustion, fatigue and poor recovery; potentially impacting on the individual's functioning in future shifts. Baseline measures of perceived psychosocial safety culture were also associated with the use of specific emotion regulation strategies. These findings are discussed in terms of the potential for the training and professional development of nurses with regard to establishing a repertoire of adaptive emotion regulation strategies to engage when interacting with patients and their families. Stress management initiatives may also aim at reducing a reliance on maladaptive strategies and promote the development and use of more adaptive strategies. Finally, the importance of developing and maintaining a strong psychosocial safety culture within an organisation is highlighted in terms of encouraging nurses to adopt emotion regulation strategies that promote and protect their own health and well-being.

Keywords: nurses, emotion regulation, emotional exhaustion, subjective fatigue, recovery

The prediction of non-suicidal self-injury (NSSI)

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The aim of the current study was to explore the associations between non-suicidal self-injury (NSSI) and psychiatric morbidity, psychological/cognitive functioning and childhood trauma and develop an accumulative risk model to assist in the prediction of NSSI. 12,006 Australians aged 10+ randomly selected from the Australian Electronic White Pages completed a 14 minute Computer Assisted Telephone Interview (CATI). The interview included questions on demographics, NSSI, psychiatric morbidity, psychological and cognitive functioning and childhood trauma. Univariate associations between risk factors and NSSI were compared using odds ratios.

Predictive models were explored with sequential logistic regression. A model containing multiple factors and taking into account a range of mediating and moderating variables was evaluated using structural equation modeling. People who self-injured in the four weeks prior to the survey were 10.0 times more likely to report severe mental health problems (95% CI 6.6-15.2), 3.3 times more likely to lose their temper (95% CI 2.2 – 4.9), 4.5 times more likely to have trouble regulating emotion using cognitive reappraisal (95% CI 2.2-9.1), 2.9 times more likely to have trouble finding the right words to describe their feelings (95% CI 2.1-4.2), 8.5 times more likely to blame themselves when feeling stressed (95% CI 5.8-12.3), 2.7 times more likely not to turn to their family for support in times of stress (95% CI 1.8-3.9), 29.8 times more likely to experience derealisation (95% CI 21.2-41.9), 4.9 times more likely to experience depersonalisation, 4.0 times more likely to report neglect (95% CI 3.4-4.6, adults only), 4.1 times more likely to report physical abuse (95% CI 3.5-4.7, adults only), and 4.0 times more likely to report sexual abuse (95% CI 3.4-4.8, adults only). Results of sequential logistic regression and structural equation modelling are forthcoming.

Keywords: *non-suicidal self-injury, psychiatric morbidity, cognitive functioning, childhood trauma, risk*

The prevalence and correlates of depressive symptoms in Chinese old population

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Lower depression prevalence rate in Chinese elderly compared to the Westerners has been reported in a number of locally sampled studies. Explanatory factors for the low prevalence, such as higher level of social support, lower level of urbanization, stigma on mental illness, and filial culture have changed significantly during the rapid socioeconomic transition of China in the last two decades. Therefore, the aim of the present study is to explore the depression prevalence in Chinese elderly population with a

nation-wide sample, taking into account the rapid economy development along with the consequential social changing condition. A cross-sectional survey was conducted with a nation-wide representative Chinese sample of 4945 old (60+ years) and pre-old (55-59 years) adults. The Center for Epidemiologic Depression Scale (CES-D) was used as the measurement tool for depressive symptoms. Demographic and four self-reported possible protective factors (Family support, Economy status, Health status, and Activities participation) were taken into consideration. The sampling was stratified with geographical region, age, sex and educational level, and convenient sampling was applied within each stratum. The study found that the prevalence of self-reported depressive symptoms (CES-D \geq 16) in the total study population was 39.86% (pre-old: 39.95%, young-old: 39.84%, old-old: 39.65%, oldest-old: 45.19%), and the CES-D score was significantly higher in the oldest-old than the three younger groups. Furthermore, multiple regression analysis indicated that age itself was not an effective predictor for depressive symptoms, whereas family support and health status explained most part of the variations of the depression. Family support and health status were the most significant protective factors for Chinese elderly depression. The Chinese traditional culture which values family has changed significantly, which may be an important factor for the increased prevalence found. In addition, the increased depressive symptoms with age were more likely attributed to age-related confounding variables rather than age by itself.

Keywords: *depression, Chinese elderly, prevalence, social support, stigma*

The process of engaging with the Nyoongar community from a Wadjallah perspective

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Aboriginal women are five times more likely than their non-indigenous counterparts to die during or soon after childbirth and are more

likely to have a baby born prematurely or to be of low birth weight. Aboriginal women are faced with the significant burden of generational stress, poverty, loss of cultural identity and support which suggests that addressing stress during the pregnancies of Aboriginal women is vital. There has been a long history of psychological research conducted with Aboriginal communities that has not provided any long term solutions and has sometimes exacerbated the situation. In order to protect the survival and cultural integrity of the Indigenous Peoples of Australia research needs to be conducted within a collaborative and culturally secure framework but most importantly be driven by the Aboriginal community. The author will be conducting research which will address these deficiencies by exploring how Aboriginal women conceptualize stress and depression during pregnancy (Study 1) which will provide the background for developing a culturally sensitive measure (Study 2). AIMS: The aim of the current paper is to describe the process by which the research aims have been developed. In general, a qualitative approach has been utilized in the current study, namely interpretive phenomenology. The context of the study has been set up through a process of incidentally engaging with the community and the development of trust. This research topic was conceived through discussions with Aboriginal women during antenatal midwifery appointments, yarning in the office and impromptu community meetings with Grandmothers and Aunties. The process of consultation began in women's homes over the last three years when Aboriginal women identified that stress was the issue that was impacting their health. This highlights the importance of long-term commitment by researchers who are interested in engaging with Indigenous people to undertake research that is meaningful and relevant to the community. This presentation will describe the journey taken when a 'Wadjallah' researcher engages with women from within the Nyoongar culture. The challenges and processes of adopting a truly collaborative approach to psychological research will be discussed, from the early negotiations with the community to the establishment of the Nyoongar Women's Reference Group.

Keywords: *Aboriginal/Indigenous women, cultural identity, pregnancy, stress*

The psychological distress of the young novice driver

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Around the world young novice drivers are at significantly greater risk of being injured or killed in road crashes than older, more experienced drivers. These drivers are also traversing the developmental milestone of adolescence, a period in which risky behaviour is normative. Adolescence is also frequently associated with psychological distress, with prevalence estimates of between 12% and 28.5% for adolescent depression (Di Clemente, Santelli, & Crosby, 2009). Road safety researchers have begun to consider the influence of the young driver's mental health upon their behaviour. Whilst correlation analyses have revealed that the young driver's mental health is associated with their risky behaviour, the extent of this influence remains unknown. Therefore this study was designed to explore the role of psychological distress in the risky behaviour of young drivers. Seven hundred and sixty-one young drivers (523 females, 238 males) aged 17-24 years ($M= 19$ years, $SD= 1.56$) with a provisional driving license (282 P1 license, 479 P2 license) completed an online survey. Participants self-reported their sociodemographic characteristics, their psychological distress as measured by Kessler's Psychological Distress Scale (K10), and 44 risky driving behaviour items. Correlation analyses revealed that greater psychological distress was associated with more risky driving behaviour ($r= .29$, $p< .001$). Regression analyses revealed that the combination of sociodemographic variables (age, gender, license, university, and marital, study and employment status) and psychological distress explained 10% of the variance in risky behaviour of the young driver. Psychological distress uniquely explained 8.2% of this variance. Separate regression analyses revealed that

psychological distress uniquely explained 6.2% of male and 9.3% of female; and 5% of P1 and 10.4% of P2 risky driving behaviour. The research findings have implications for mental health professionals and road safety researchers alike. Whilst insufficient as a stand-alone measure, research into young novice driver risky behaviour should incorporate a measure of their psychological distress. Moreover, it appears that adolescents who are experiencing psychological distress place themselves at greater risk of harm by undertaking risky driving behaviour. Accordingly adolescent mental health interventions may also reduce the young driver's risk of injury due to a car crash.

Keywords: *novice drivers, risky behaviours, adolescence, psychological distress*

The public perception of psychologists: confusion with other professions and GP perceptions

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The provision of accessible and effective mental health services has become an increasing priority in Australia over the last decade. In November 2006, various levels of government in Australia responded to lobbying from the Australian Psychological Society (APS), reports from parliamentary inquiries, and independent reviews acknowledging the need for an increased level of participation by psychologists in mental health care, which ultimately resulted in the provision of some mental health care services on Medicare (Moulding et al., 2007; Perkins et al., 2007, van Gool, 2007). The aim of this presentation is to present the findings from two published studies which suggest that the public image of psychologists is an integral factor in this allocation of funding (in the form of a Medicare rebate), and remains so with regard to the allocation of referrals (from General Practitioners (GPs) and psychiatrists). A thematic analysis (Braun & Clarke, 2006) was used to explore the issues that emerged across interviews from two separate published studies. The inherent flexibility of a thematic analysis, its ability to provide a comprehensive and systematic description of the data, and the opportunity it provides to focus on and

illuminate specific aspects of the data, allow for the clear analysis of a qualitative data set. Results from the two studies suggest that the public perception of psychologists is easily confused with other health professionals (particularly psychiatrists), and that GPs do not have a clear understanding of the role of psychologists or the type and amount of training which they undertake. A range of recommendations are made to distinguish (and protect) the specific role of psychologists from other mental health professionals. Recommendations are also provided to assist the profession of psychology in clearly articulating its public image particularly with regard to GPs and in light of the recent Medicare changes.

Keywords: *mental health services, public image, Medicare funding*

The relationship between cognitive development and attachment style

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Research indicates that securely attached children have advanced language skills and are well adjusted, whereas insecurely attached children often have ongoing problems that include learning disabilities, and psychological and behavioural problems (Prior & Glaser, 2006). Interestingly, some researchers have claimed that gifted children are well balanced, whereas others have found the opposite to be true, especially during the teenage years (Winner, 2000). However the literature on gifted children views socio-emotional problems and uneven development in terms of a by-product of giftedness (Silverman, 1997). Therefore, the current study was designed to test the hypothesis that cognitive development, socio-emotional adjustment and learning disabilities are all related to attachment style, regardless of giftedness. Participating 7-10 year old children with an already completed WISC-IV IQ assessment (currently $n=47$) and their parents have been recruited. Participants have been drawn from a New Zealand psychology clinic specializing in gifted children, the Macquarie University Rod Power Psychology Clinic, the New

South Wales Association for Gifted and Talented Children, and Catholic Education Office primary schools from the Parramatta Diocese. Data collection includes a general background questionnaire, the Experience in Close Relationships Scale (Brennan, Clark, & Shaver, 1998), the Attachment Style Classification Questionnaire for Latency Age Children (ASCQ) (Finzi et al., 1996), and the Child Behavior Checklist (Achenbach, 2001). Qualitative interviews with mothers have also been collected and analyzed. Preliminary findings indicate a positive trend correlating higher IQ with secure attachment. Additionally, children were more likely to have avoidant attachment styles where the Perceptual Reasoning Index scores were higher than Verbal Comprehension Index scores. These findings are related to the current model of giftedness used in Australian schools and implications will be presented.

Keywords: *cognitive development, attachment style, gifted children*

The relationship between subjective well-being and satisfaction with daily travel

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Affective/Cognitive evaluations of daily travel are hypothesized to affect subjective well-being (SWB) (cf. Ettema et al 2009). Since global SWB is known to be causally related to domain-specific SWB (e.g., Oishi et al 1999), improvement of travel satisfaction and affective status during travel (travel-specific SWB) should contribute to global SWB. This should be one important reason for transport policy measures aiming at improving evaluations of travel. Hard measures such as travel time improvement, however, has typically attracted transport policy makers' attention and measures of affective and non-instrumental factors have not. However, as a recent study shows (Diener et al, 2008), accumulation of affective and cognitive responses to specific experiences, caused by

non-instrumental factors, would have an effect on travel-specific SWB. Thus, further understandings for travel-specific SWB may contribute to improve evaluation of such travel policy. The present research explores the determinants of affective/cognitive travel-specific SWB while focusing on the differences between the different legs of daily trips. Thus, a whole trip (called a linked trip) consists of trip legs classified by their travel mode. Each trip leg with 'hard' (e.g. travel time) and more qualitative (e.g. crowdedness, visibility of scenery) attributes may affect mood and therefore increase travel-specific SWB. Measurements of satisfaction with trip legs would enable us to understand determinants of travel specific SWB more clearly. To examine the effect on travel-specific SWB of satisfaction with trip legs of daily trips, we conducted a survey among 120 Japanese university students. In a questionnaire format we asked respondents to consider four different daily trips and for each to list their trip legs. The respondents were also asked to rate attributes (for each linked trip; travel purpose, for each trip legs; travel mode, activity during travel, crowdedness and visibility/preference of scenery they can see during the trip), their affective evaluation and degree of satisfaction during each trip. The relationships between attributes of trips and trip legs, affective and cognitive travel-specific SWB and global SWB were examined. Overall the results confirmed the expected directions of the relationships. Results show people rate high SWB for trip which they can see and prefer scenery during the trip. The effect of other activities and crowdedness vary according to travel mode and travel purpose.

Keywords: *subjective well-being, daily travel, travel satisfaction, cognitive responses*

The restorative value of different landscape types

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Nearby outdoor recreation areas provide important opportunities for the public to recover from the demands of their daily life. But the

need for these areas conflict with the current landscape development in peri-urban areas in Western Europe. There, competing forms of land use, such as settlement, and road construction, increase the pressure on nearby outdoor recreation areas. It can be expected that spaces for recreation will further decrease so it is all the more important to design the remaining recreation areas so that they are of high quality. To this end, we examined which landscape elements of a nearby recreation area are preferred by residents when seeking to fulfill their restoration needs. A total of 542 inhabitants of a Swiss peri-urban town returned a postal questionnaire in which they indicated their preference for each of 20 landscape elements on their routes within the nearby recreation area. Further data were collected on how often they used the area on workdays and which of 28 cognitive, emotional, physical, social restorative and ego-related goals motivated visitation. Initial factor analysis yielded 7 landscape “types” which we labelled savannah, mountain, open country, water, semi-private outdoors, and light & space. Ordinal correlations between landscape type and restoration goals showed specific patterns of landscape types combining with use goals. These relationships were found to be more complex for social and ego-related use goals than for cognitive, emotional, and physical goals. The results indicate that the type of landscape matters when attempting to encourage or impede specific restorative effects.

Keywords: recreation, landscape development, recovery, goals

The role of age as a moderator of the P-E fit—performance association

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As workforces of highly developed societies are rapidly aging it becomes increasingly important to understand the role of employees' development and age-related changes. It has been argued that developmental dynamics pertaining to cognitive abilities and personality can result in declined person-environment (P-E)

fit (e.g., Kanfer and Ackerman 2004). Although effects of developmental dynamics have been addressed theoretically, empirical data is widely lacking. This paper contributes to close this gap by providing results of an empirical examination of the moderating impact of employees' age on the relationship between P-E fit and individual performance. A multilevel study comprising 1,526 employees (lower level) and 586 supervisor ratings (lower level) in 74 German and Austrian business units (higher level) focused on the role of chronological age, job, and organization tenure as well as time perspective for P-E fit (demands-abilities and needs-supplies), and supervisor-rated individual performance (i.e. in-role behavior and organizational citizenship behavior). Multilevel data analyses provide evidence for the associations between P-E fit and individual performance, i.e. between needs-supplies fit and in-role behavior and organizational citizenship behavior (individuals) as well as between demands-abilities fit and in-role behavior and organizational citizenship behavior (organization). Chronological age of the employees is moderating the associations between demands-abilities fit and in-role behavior as well as between needs-supplies fit and in-role behavior such that the relationship becomes stronger with increasing age. Furthermore, the association between needs-supplies fit and organizational citizenship behavior (organization) exhibits an inverted U-shaped curvilinear development with increasing age, first strengthening and later weakening the relationship. In line with expectations derived from lifespan theory age turns out to be a relevant moderator for HR management. As workforces age it becomes more important to consider and incorporate developmental dynamics in HR management with regards to the alignment of person and job characteristics contingent of employees' age.

Keywords: age-related changes, cognitive ability, personality, developmental dynamics, individual performance

The role of anger in obsessive compulsive checking

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Anecdotal, case study and empirical evidence has indicated that anger may play a salient role in the presentation of Obsessive Compulsive Disorder (OCD). However the extant literature on the relationship between anger and OCD is inconsistent and compromised by numerous methodological limitations. The present study aimed to overcome previous limitations and provide new findings about the role of anger in OCD checking subtype. The sample comprised 34 OCD patients who had checking as their primary symptom, with age and gender matched non-OCD controls. All patients met DSM-IV-TR criteria for OCD. Participants completed the Trait Anger Expression Inventory-2 (STAXI-2; Spielberger, 1999), Vancouver Obsessional Compulsive Inventory (VOCI; Thordarson, 2004) and the Beck Depression Inventory (BDI; Beck, et al. 1996). Controls were additionally screened using the Padua Inventory-Washington State University Revision (PI-WSUR; Burns, et al, 1996) to ensure that did not have OCD. Compared to the age and gender matched controls, the OCD group scored higher on trait anger, anger expression and anger suppression, but lower on anger control-in. Trait anger remained significantly higher in the OCD group after controlling for depression. Moreover, severity of checking compulsions was found to significantly predict trait anger, above and beyond the effects of depression. These findings demonstrate that anger may play an important role in OCD. As expected, overall anger expression scores were found to be higher in OCD patients, indicating that these individuals are more likely to experience anger than normal controls. The theoretical and clinical implications of the results are discussed. In particular, we suggest that the data provides support for an integrated model based on Wells (1997) and Berkowitz's (2003) models of OCD and anger, respectively. The findings from the present study will also be compared with those from recent empirical work in this area.

Keywords: *obsessive compulsive disorder, anger, traits*

The role of attachment style and interpersonal processes in shaping organisational citizenship behaviour

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It has recently been suggested that organisational citizenship behaviour (OCB), is in part, predicted by an individual's ability to build bonds and communicate effectively with co-workers and maintain a positive sense of self-worth. However, little research has investigated the relationships between these interpersonal factors and OCB using a theoretical framework grounded in relationship processes. Attachment theory, an interpersonal theory of personality development, can provide a framework in which to investigate the role of relationship processes in predicting OCB. The aim of the study was to examine the relationship between attachment style, interpersonal communication competence, self-esteem and OCB. A total of 131 participants (58 males, 71 females, 2 not recorded, $M = 44.79$ years, $SD = 9.09$ years) completed an online questionnaire comprising measures of attachment, communication competence, self-esteem and OCB. The questionnaire took approximately 15 minutes to complete. Using path analysis, a double mediation model was tested and demonstrated excellent fit $\chi^2(3, N = 131) = 3.318, p > .01, CFI = .998; RMSEA = .029$. Communication competence and self-esteem significantly mediated the association between attachment anxiety and OCB, whereby, anxiety was negatively associated with communication competence and self-esteem. These in turn, were positively associated with OCB. The relationship between attachment avoidance and OCB was only mediated by communication competence, whereby avoidance was negatively associated with communication, which in turn, was positively associated with OCB. Communication competence mediated the association between self-esteem and OCB with positive associations found between these pathways in the model. The present findings demonstrate that attachment plays a key role in explaining an individual's propensity to engage in OCB through their ability to communicate

with colleagues and the extent to which they feel positive about themselves. This is the first study to develop such an integrative model and highlights the importance of considering relationship processes in employees' demonstration of OCB.

Keywords: *attachment style, organisational citizenship behaviour, interpersonal factors, self-esteem*

The role of climate for transfer of training and intrinsic benefits in explaining employees' motivation to attend voluntary professional development activities

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Attendance at organisationally provided internal training and development activities (T&D), is often non-mandatory and therefore, to some degree, contingent on employees' motivation to attend. Organisational climate for the transfer of training (transfer climate) includes work environment factors that influence the use of skills and knowledge gained during training when back in the workplace. We expected that transfer climate would be a strong determinant of employees' intention to participate in training activities. Based on Self-Determination Theory (SDT) which describes motivation on a self-determination continuum involving various degrees of controlled (external) and autonomous (more intrinsic) motivation, we predicted that both transfer climate and perceived intrinsic benefits from attendance at T&D would be linked to more autonomous motivation to attend. This research also investigated the influence of different components of transfer climate factors and perceptions of intrinsic benefits on four types of motivation (amotivation, external regulation, identified regulation, and intrinsic motivation) to attend non-mandatory T&D activities. Academic and general staff employees of a regional Australian university completed a self-report Professional Development Survey developed for the study ($n = 456$). Multivariate analysis using Structural Equation Modeling was used to test the influence of transfer climate factors and

intrinsic benefits on four types of motivation. Results showed that transfer climate factors differentially influenced the four types of motivation. Intrinsic benefits was a strong positive predictor of more autonomous types of motivation and a strong negative predictor of more controlled motivation and amotivation. Analysis of mediational models also showed that the relationship between transfer climate factors and type of motivation was partially mediated by intrinsic benefits. Employers should focus on strategies that generate more autonomous motivation to attend non-mandatory T&D among employees. These strategies should include promoting a positive transfer climate using positive reinforcement of the intrinsic benefits of T&D.

Keywords: *organisational training and development, motivation, Organisational climate, transfer climate, self determination theory*

The role of filial piety in the career commitment process among Chinese postgraduates

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The current study extended the research line regarding the relationship between family of origin and adaptive career decision making. More specifically, it examined the unique impact of filial piety in predicting Chinese postgraduates' career decision self-efficacy, vocational commitment, and their tendency to foreclose on their choices after controlling for the Big Five personality traits. The sample consisted of 796 postgraduates recruited from 5 universities in Beijing. Of these, 468 were males and 328 females, coming from the first year (337, 42.3%), second year (207, 26.0%), and third year (243, 30.5%). Nine students (1.1%) did not complete this item. Five measures were used. The Career-Related Filial Piety Scale (Jin, 2009), The NEO-Five Factor Inventory (Costa & McCrae, 1992), Career Decision Self-Efficacy Scale-Short Form (Betz, Klein, & Taylor, 1996), and the Commitment to Career Choices Scale (Blustein, Ellis & Devenis, 1989) assessed the key constructs, reciprocal or authoritarian filial piety, career decision self-efficacy, vocational

commitment, and the tendency to foreclose, respectively. All these measures showed acceptable internal consistency reliability with the current sample, ranging from .66 (Openness) to .91 (career decision self-efficacy). A demographic questionnaire was used to collect participants' gender and academic year. The zero-order correlations showed that reciprocal filial piety was associated positively with self-efficacy and vocational commitment, while authoritarian filial piety was correlated negatively with vocational commitment but positively with the tendency to foreclose ($p < .01$). The hierarchical multiple regression analyses further revealed that reciprocal filial piety uniquely accounted for 3% ($p < .001$) of the variance in career decision self-efficacy, while authoritarian filial piety uniquely accounted for 5% ($p < .001$) of the variance in the tendency to foreclose, after controlling for the Big Five personality traits, gender, and academic year. This study applied the dual model of filial piety to understanding Chinese postgraduates' career commitment process. The findings partially supported the unique contribution of filial piety to the prediction of career decision self-efficacy and career choice commitment beyond and above personality traits. The theoretical and practical implications of the results are discussed.

Keywords: family of origin, decision making, filial piety, self-efficacy, vocational commitment

The role of hope in promoting posttraumatic growth after experiencing bullying in school

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Accumulating evidence has shown that people reported positive changes after experiencing stressful life events. Tedeschi and Calhoun (2004) used the term posttraumatic growth (PTG) to refer to such self-perceived positive changes. However, not all individuals reported PTG after undergoing stressful life events. Thus, identifying factors that facilitate PTG is crucial because these factors can promote better adjustment in the face of adversity. In this study, the role of hope, an adaptive cognitive style, in

promoting PTG beyond and above other personal and emotional factors, after experiencing bullying in schools was examined. Seven hundred and four participants were recruited from 7 different local secondary schools in Hong Kong. Among them, 169 participants (88 boys and 81 girls, mean age 13.4 yrs) have reported experiencing being bullied in school in the last several months. They have also completed the Posttraumatic Growth Inventory, Children Hope Scale and other measures assessing their level of happiness, depression and self-esteem. Correlation analysis revealed that PTG was significantly and positively associated with happiness, self-esteem and hope ($r = .44, .33$ & $.50, p < .01$ respectively) and negatively associated with frequency of bullying and depression ($r = -.33$ & $-.47, p < .01$ respectively). In order to test the predictive power of hope on PTG beyond and above the other emotional and personal factors, a stepwise hierarchical regression analysis was performed with demographic variables were entered into the first model followed by happiness, depression and self-esteem in the second model and hope was entered lastly into the third model. Results revealed that gender, frequency of bullying experienced and depression were significant predictors of PTG. More importantly, hope was found to be a significant predictor of PTG even after controlling all the other factors. The unique and total variance of PTG explained by hope and the final model was about 10% and 41% respectively. This study provided evidence that hope contributed unique facilitative effects on PTG even after controlling the effects of other important factors. Further research investigates and compares the effects of different cognitive factors such as expectancy model of optimism, explanatory style and hope will reveal a more comprehensive picture of the underlying cognitive and psychological mechanism of PTG.

Keywords: stressful life events, posttraumatic growth, positive changes, hope, bullying

The role of predicted, on-line and remembered satisfaction in current travel mode choice

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Previous research has revealed that measures of predicted and remembered satisfaction are biased, as compared to the more accurate on-line measures of experienced satisfaction. The aim of this study was to investigate whether (a) predicted satisfaction, (b) experienced satisfaction or (c) remembered satisfaction with public transport, is the best predictor for car users' (i) current travel mode choice and (ii) their future intentions to travel by public transport. The study used a longitudinal, quasi-experimental design in which 106 car users received a one-month free public transport travel card. Prior to the trial period they predicted what their satisfaction with public transport would be, both overall and on several satisfaction-attributes. During and following the period they reported their on-line experienced satisfaction. Two years later, they were asked to recall their satisfaction with the public transport service at the time of the trial period. In addition, they were asked to report their current frequency of public transport usage. Finally, they were asked to estimate their intention to use public transport in the future. Repeated measures' MANOVAs showed that predicted satisfaction is biased, as compared to reports of on-line experienced satisfaction. Data on remembered satisfaction, current frequency of public transport usage, and future intentions of whether or not to use public transport were analyzed and reported. The analyses revealed whether anticipated, on-line or remembered satisfaction predicted car users' current travel behavior and their future intentions to use public transport. Car users' make mistakes when trying to forecast their satisfaction with public transport. Our research showed that car users' predictions are biased as compared to on-line experienced satisfaction. In this study, conclusions were also made of car users' remembered satisfaction with public transport two years after a completed trial period. These results show whether on-line measures or retrospective measures are superior to predict car users' current travel mode choice and future intention to use public transport.

Keywords: *predicted satisfaction, experienced satisfaction, remembered satisfaction, public transport*

The role of Primary Motor Cortex in abstract and concrete sentences comprehension

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One of the main challenges of embodied theories is to explain the comprehension of abstract sentences. In a recent work Scorolli, et al. (submitted) used a new paradigm that allows to study the dimension abstract-concrete in a continuum. They examined quadruples of sentences where they combined the same Concrete Verb with a Concrete Noun and with an Abstract Noun, and the same Abstract Verb with the nouns previously used. Using the same paradigm we performed a Transcranial Magnetic Stimulation (TMS) study, to replicate their results and to explore the role of the left primary motor cortex during the processing of motor and non-motor verbs, combined with nouns of graspable and non-graspable objects. Participants were required to judge the sensibility of 48 quadruples built by combining a Concrete Verb with a Concrete Noun or an Abstract Noun and by combining an Abstract Verb with the same nouns previously used. Participants received a single TMS pulse 250ms after the presentation of the noun or of the verb. Compatible combinations were processed faster than mixed combinations. Specifically concerning the effects of TMS on the portion of M1 where is represented the hand, with sentences containing Abstract Verbs, participants were equally fast both for the stimulation on the first and on the second word. When the combinations contained Concrete Verbs, participants were faster when the pulse was given on the first than on the second word. The advantage of the compatible combinations replicates that one obtained by Scorolli et al. (submitted) and it's in line with the idea that abstract and concrete words are processed in parallel systems. The stimulation of M1 after the presentation of the first but not the second

word leads to faster RTs with sentences containing Concrete Verbs. An amodal theory doesn't predict a specific modulation of the stimulation depending on the kind of verb; a modal theory predicts a specific modulation regardless of the kind of verb. Both the predictions are disconfirmed by the data that seem to be in favor of theories based on multiple types of representation (Dove, 2009; Barsalou, et al., 2008; Borghi e Cimatti, 2009).

Keywords: *comprehension, left primary motor cortex, abstract sentences, transcranial magnetic stimulation, information processing*

The role of religiosity in mediating biopsychosocial outcomes in homosexuals and heterosexuals with HIV: a structural-equation-modeling comparison study

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Religiosity has been shown to be a resource for many adults with HIV, but may be expressed differently according to sexual orientation. The purpose of this study was to examine how homosexuals and heterosexuals with HIV benefit from religiosity. In a state-wide survey (Alabama, USA), 395 adults with HIV were assessed on a variety of medical and psychosocial measures. Factors were extracted for age, health status, disease duration, education, social support, mood, and religiosity and were specified in a structural equation model for two groups (i.e., homosexuals and heterosexuals), where religiosity mediated the effects of age, education, and chronicity on the biopsychosocial outcomes of health, social support, and mood. All of the trimmed models fit the data well (GFI > .90; RMSEA < .10). For heterosexuals ($n = 230$), those who were older had higher levels of religiosity but religiosity did not mediate any of the biopsychosocial outcomes. For homosexuals ($n = 165$), religiosity was positively related to social support. Results from this structural-equation-modeling comparison study suggest that religiosity may facilitate certain positive biopsychosocial outcomes but is expressed differently by sexual orientation.

Keywords: *HIV, religiosity, sexual orientation*

The role of safety discussions in improving speeding in the work vehicle

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Work-related driving crashes are the most common cause of work-related injury, death, and absence from work in Australia and overseas. Surprisingly however, limited attention has been given to initiatives designed to improve safety outcomes in the work-related driving setting. This research paper will present preliminary findings from a research project designed to examine the effects of increasing work-related driving safety discussions on the relationship between drivers and their supervisors and motivations to drive safely. The research project was conducted within a community nursing population, where 112 drivers were matched with 23 supervisors. To establish discussions between supervisors and drivers, safety sessions were conducted on a monthly basis with supervisors of the drivers. At these sessions, the researcher presented context specific, audio-based anti-speeding messages. Throughout the course of the intervention and following each of these safety sessions, supervisors were instructed to ensure that all drivers within their workgroup listened to each particular anti-speeding message at least once a fortnight. In addition to the message, supervisors were also encouraged to frequently promote the anti-speeding message through any contact they had with their drivers (i.e., face to face, email, SMS text, and/or paper based contact). Fortnightly discussions were subsequently held with drivers, whereby the researchers ascertained the number and type of discussions supervisors engaged in with their drivers. These discussions also assessed drivers' perceptions of the group safety climate. In addition to the fortnightly discussion, drivers completed a daily speed reporting form which assessed the proportion of their driving day spent knowingly over the speed limit. As predicted, the results found that if supervisors reported a good safety climate prior to the intervention, increasing the number of safety discussions resulted in drivers reporting a high quality relationship (i.e., leader-member-

exchange) with their supervisor post intervention. In addition, if drivers reported a good safety climate, increasing the number of discussions resulted in increased motivation to drive safely post intervention. Motivations to drive safely prior to the intervention also predicted self-reported speeding over the subsequent three months of reporting. These results suggest safety discussions play an important role in improving the exchange between supervisors and their drivers and drivers' subsequent motivation to drive safely and, in turn, self reported speeding.

Keywords: *work-related injury, driving accidents, safety*

The roles of mother's and father's caregiving characteristics in the development of adult attachment orientations among Filipino young adults

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The study aims to know which of the parental caregiving characteristics best predicts adult attachment orientations. A survey was distributed among 179 single Filipino young adult professionals ages 21-31. To measure the Attachment Orientations of the participants, the study used the Experience in Close Relationships-Revised (ECR-R) Adult Attachment Questionnaire by Fraley, Waller and Brennan (2000). To assess the parental caregiving characteristics, the participants were asked to separately rate their mother and father base on the three caregiving styles which were warm, inconsistent and rejecting. Regression analysis was done to analyze which of the caregiving characteristics (i.e., mother's warmth, inconsistency and rejection; father's warmth, inconsistency and rejection) best predicts attachment-related anxiety and avoidance. Furthermore, an interview was done to further explore the parent-child relationship histories. Result showed that mother's warmth and father's inconsistency best predicts one's attachment-related anxiety while mother's warmth and father's rejection best predicts one's attachment-related avoidance. The warmth and responsiveness of the mother was seen to lessen both attachment-related anxiety

and avoidance, however, the difference lies with the caregiving characteristics of the father. If the father is seen to be inconsistent, it is most likely that one would develop higher attachment-related anxiety. On the other hand, it is the father's rejection which most likely leads to higher attachment-related avoidance. This was further substantiated in the interviews done thereafter. Mothers of those with lower anxiety and avoidance were reported to be more affectionate, attentive, available and supportive. Fathers of those with lower anxiety were reported to be indifferent and inconsistent while fathers of those with lower avoidance were described to be absentee, distant and demanding. This study further validates the importance of parent's roles especially in the formative years of the child as it may have repercussions on one's later development of relationships. Further, it also showed that not only mother's caregiving characteristics influences one's development, the father's role is also seen as crucial in influencing one's adult attachment orientations. The findings of this study may be helpful in relationships and family counseling.

Keywords: *parental caregiving, adult attachment, attachment-related anxiety, attachment-related avoidance, parent-child relationship*

The search for HMAS Sydney II: Locating a lost ship through the integration of survivor reports

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The aim of the current study was to describe the unique application of cognitive psychology to the successful search for HMAS Sydney II which was located off the coast of Western Australia in March 2008, after having been lost for nearly 67 years. This had created an enduring mystery concerning the circumstances of its loss and the fate of over 600 Australian Navy personnel who had perished. In order to locate Sydney, it was first necessary to locate HSK Kormoran, the German raider that ultimately sank her and was then scuttled by its crew. While there were no survivors from Sydney, there existed a database

of reports of interviews of the German survivors. While these reports all suggested a general area, they were highly variable and no one report could be safely assumed to be reliable. We addressed this problem by drawing an analogy to Bartlett's famous War of Ghosts study. Each report could be considered as a degraded version of one of a small number of original source statements. By identifying these statements, we had a set of independent constraints that any potential location needed to satisfy. After combining the source statements with two additional pieces of physical evidence, we identified an area of high probability centred on the point, 26° 07'S 111° 02'E, approximately 300km south-west of the Western Australia town of Carnarvon. In February 2008, the search for Kormoran was initiated by David Mearns on behalf of the Finding Sydney Foundation which had raised the necessary funds. Using side scan sonar, Kormoran was discovered at 26° 05' 49"S 111° 04' 27'E – less than 5 km from the point that we had identified. Sydney was discovered a few days later and announced to the public by the Prime Minister. Our analysis of this problem was based on an innovative and, as far as we are aware, unique application of cognitive psychology based on the following principles: (1) The ability to account for variability in human data in a systematic manner; (2) a model of information integration as a basis for decision making; (3) commitment to a quantitative approach. We envisage that our analysis may be extended to future searches involving the use of disparate, fragmentary, and contradictory information.

Keywords: *HMAS Sydney II, survivor reports, cognitive psychology, decision making, quantitative approach*

The structure of perceptions of counterproductive work behaviour (CWB)

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The aim of this research was to examine individuals' perception of counterproductive work behaviour (CWB). An important issue to

consider in understanding CWB is the community perception as to what constitutes CWB, since counterproductive behaviours that are not perceived as serious may be more common. Previous research focused on identifying dimensionality and antecedents of CWB in people actually engaging in such behaviour. This study examines how people more generally perceive these behaviours, and examines competing models from the participant research in order to derive a model of perceived counterproductive work behaviours. 266 undergraduates (over 90% of them with part-time work experience of a median duration of 36 months) completed a survey where they rated the seriousness of 84 counterproductive work behaviours. Results showed that people have a complex structure of perceived counterproductive work behaviours, as a fifteen factor model was required to model that data. A second order factor model gave two factors: one focused on factors that are related to the company or others such as, 'Give away goods or services for free without authorization' or 'Verbally abuse a supervisor'. The other second order factor focused on personally advantageous behaviours such as 'Misuse of business expense account' or 'Conduct personal business during work time'. While an average of 99% of the group rated behaviours from the first factor as unacceptable, 30% rated items from the second factor as either acceptable or neither acceptable or unacceptable. The perception of counterproductive work behaviours follows a complex structure and attempts to change organizational climates or to screen future employees with respect to this, particularly with respect to relatively undetectable behaviours needs to take this complexity into account.

Keywords: *counterproductive work behaviour, perceptions*

The study of relationships between expatriates' psychological contract and employees' work outcomes: The mediating effects of organizational commitment

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During the trend of globalization, expatriates have become an important workforce in multinational corporations. In general, the average cost of expatriates was over three times higher than other employees. However, many expatriates unable to complete their overseas assignments. These failures will cause a tremendous expend for multinational companies. Past research argued that the psychological contract is not only helpful for building employees' organizational commitments, but also could bring benefits for the organizational outcomes. This field study extended previous research to examine the mediating role of organizational commitment between expatriates' psychological contract and employees' task performance and organizational citizenship behavior. Samples consisted of 309 expatriates with at least six month overseas experience from 22 multinational companies headquartered in Taiwan. To test the proposed hypotheses, this study was analyzed by Structural Equation Model (SEM) that used the maximum likelihood estimation to estimate all of the parameters. The results partially supported hypotheses. Therefore, the expatriates' organizational commitment had a partially mediating effect between psychological contract and task performance. However, expatriates' organizational commitment had a fully mediating effect between psychological contract and organizational citizenship behavior. The findings from this study has provided contributions to both theory and field study of multinational company and psychological contract. Moreover, it helped to clarify the mechanisms between psychological contract and organizational commitment and organizational citizenship behavior. The results suggested that psychological contract may directly or indirectly influence expatriates' task performance through arousing their organizational commitment. In additional, the psychological contract could indirectly motivate expatriates to demonstrate high organizational citizenship behavior by organizational commitment.

Keywords: *organizational citizenship behavior, expatriate, organisational commitment, organisational outcomes, task performance*

The subjective perception of benefits from cognitive fitness interventions in older women remains domain specific

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In a randomized controlled trial we showed that a mental and a physical activity intervention were effective to enhance or maintain cognitive fitness, i.e., episodic memory and working memory. A positive perception of one's own cognitive fitness is an important condition for high self-efficacy beliefs and, thus, can sustain independence in old age. Here, we pose the question whether objective cognitive benefits are reflected in subjective perceptions of memory and concentration. This would underscore the practical relevance of these kinds of interventions. Healthy women ($N = 259$), aged 70 to 93 years, were randomly assigned to participate in either a mentally challenging computer course or in a demanding physical exercise course or in a control group. Each intervention course lasted six months with 90-minute sessions three times per week. In addition to pre-post-tests of episodic memory and executive function, subjective evaluations of the perceived change in memory and concentration were captured at baseline, at four months and six months and at a ten-month follow-up. Multilevel linear modelling was used to compare trends over time in the three groups. Despite comparable objective cognitive benefits from both the mental and the physical interventions (in contrast to the control group), only the women in the computer course had perceived benefits in memory, $F(2, 707.9) = 4.31$, $p = .01$, and concentration, $F(2, 714.2) = 4.75$, $p = .009$. The exercise group, in contrast, rated only their physical health as having improved, $F(2, 562.0) = 4.63$, $p = .01$. These effects were seen during the intervention period, i.e., at four months and again at six months, but did not persist up to the ten-month follow-up. The perception of cognitive benefits seems to be biased towards the obvious intervention domain, i.e., gains are perceived in the corresponding activity domain only. A sensitization for transfer effects could not only enhance motivation and satisfaction with the

outcomes in participants of intervention programs but may also be beneficial in terms of practical relevance.

Keywords: *cognitive fitness, episodic memory, working memory, self-efficacy, executive function*

The support for patients at risk of suicide and self-harm component of the access to allied psychological services (ATAPS) projects

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The Access to Allied Psychological Services (ATAPS) projects have been operating as a component of the Better Outcomes in Mental Health Care program (BOiMHC) since 2001. This component has enabled GPs, through Divisions of General Practice, to refer consumers to allied health professionals for up to twelve (or 18 in exceptional circumstances) sessions of evidence-based mental health care (i.e., Cognitive Behavioural Therapy). Until mid-2008, the ATAPS projects have targeted people with high prevalence mental disorders. In late 2008, the Support for Patients at Risk of Suicide and Self-harm demonstration project, funded jointly under the Australian National Suicide Prevention Strategy and the ATAPS component of the BOiMHC program, provided additional targeted funding to 19 Divisions of General Practice to offer a more intensive, prioritised service for people who are at risk of suicide, who may or may not have a mental disorder. The Centre for Health Policy, Programs and Economics at the University of Melbourne is currently evaluating this project. Data sources include a web-based minimum data and purpose designed interviews with project officers and providers. This presentation will report data related to the uptake of the demonstration project by consumers, GPs and allied health professionals, as well as the outcomes of qualitative surveys of stakeholders. The experiences of Divisions in implementing the project, GPs and Emergency Departments making referrals, and allied health professionals delivering services will be reported. Divisions were enthusiastic about the project but reported a need to re-evaluate their existing models of service delivery in order to

meet the requirements of the demonstration project and engage GPs and allied health professionals in the care of these consumers.

Keywords: *access to allied psychological services, suicide, self-harm*

The transitional stress and adjustment model (TSA)

ISRAELASHVILI, M. (Tel Aviv University)

The Transitional Stress and Adjustment (TSA) model advocates the idea that there are several universal phases that every person who is undergoing a process of transition may experience in the course of approaching a state of (re-)adjustment. Furthermore, the TSA model suggests that the six suggested phases (e.g., exploration of situational lawfulness) should also function as the components assessed to evaluate the extent to which the environment (e.g., workplace, marriage, school) supports the individual in his pursuit of resolution regarding these phases. Thus, a comprehensive understanding of the process of transitional stress and adjustment would be achieved through an exploration of the fit between the person and the environment with regard to the TSA phases. The TSA Model emerged from a cross-situational analysis of the components that have been suggested by various stage-models of adjustment to a new situation in the literature. Though the TSA model incorporates mostly cognitive components, it is argued that emotional liability is an unavoidable characteristic of any adjustment process, due to the person's dialectical shifts – backward and forward - in exploration of P-E fit in each of the phases. In light of the prominent number of people who seek counseling in times of transition and adjustment, the TSA model can serve as a conceptual framework for better understanding the antecedents and processes of positive adjustment to life transitions. Moreover, it can also serve as a practical guide for counseling psychologists who are dealing with people in transitions. An example of that would be demonstrated with regard to counseling new immigrants who are troubled with relocation and adjustment to the new land.

Keywords: *transitional stress and adjustment (TSA) model, environment, counselling*

The type of chronic childhood trauma and parental behavior

WIDERA WYSOCZANSKA, A. (University of Wroclaw)

The goal of this study was to learn about parental behaviors in families with a specific type of abuse. This is part of a larger study on the risk factors which contribute to the inception and, especially, the maintenance of a given type of abuse in the family. Studied were 704 randomly selected persons with a mean age of 35 years (450 women and 254 men) and with secondary education or higher. The qualitative interviews "Family Childhood Abuse Map" and structured qualitative questionnaire "Intimate Situations Questionnaire" were used to determine the type of childhood abuse experienced by the investigated persons. The structured interview "Retrospective Perception of Parental Attitudes", with a Cronbach's alpha of 0.94, was used to identify the person's retrospective and subjective perception of their parents' parental attitudes. 88 percent of the study group had experienced emotional abuse, 60% physical abuse, 38% sexual abuse with touching, 58% alcoholism of the father, and 28% alcoholism of the mother. The statistical analysis was based on Spearman's correlation coefficient and cluster analysis. The results showed which behaviors of the mothers and fathers of the families with a specific type of abuse appear significantly more frequently or more rarely compared with mothers and fathers of the families with other types of abuse. They fall into six dimensions: care and support vs. neglect and blaming; the quality of satisfying the child's needs; the quality of abiding to boundaries, rules, and roles in the family; the quality of self-confidence as a mother; and partnership in child rearing. This study is intended to help in preparing preventative and therapeutic programs for children and adults from dysfunctional families and parents.

Keywords: *parental behaviors, childhood abuse, risk factors, therapeutic practice, dysfunctional families*

The underlying processes involved in the development of anxiety in adolescence: Test of a conceptual framework

PAPANDREA, K. (The University of Adelaide)

Research indicates associations between specific parenting styles and negative developmental problems in adolescents. However, the underlying processes regarding how such parenting dimensions contribute to such outcomes have not yet been clarified. By employing a theory-driven conceptual framework, the present study reports on the first wave of a two-year longitudinal study examining the relationships among maternal and paternal psychological control and responsiveness, and characteristics of adolescents, such as self-esteem, and a range of negative developmental outcomes, such as anxiety and depression. A community sample of 509 adolescents (14-15 years of age) attending fifteen high schools from rural and metropolitan areas in South Australia completed a battery of self-reported measures online, and are due for a followed-up in March, 2010. Structural Equation Modeling (SEM) will be employed to test the proposed conceptual framework. Results concurrently demonstrated that both maternal and paternal psychological control directly and indirectly predicted social anxiety through impacting on the healthy development of the adolescent's self-esteem. The findings highlight that parental attempts to psychologically control the behaviour of adolescents through such methods as love withdrawal, guilt induction, and invalidation of feelings, contribute to the development of anxiety, in particular social anxiety in adolescents. Moreover, such parenting techniques may do so through promoting thoughts and feelings of inadequacy associated with a negative sense of self, which is often an inherent feature of anxiety. Thus, the developing sense of self may be viewed as an underlying process of the relationship between parental psychological control and social anxiety. It is anticipated that a better understanding of the etiological pathways of social anxiety disorder (SAD) in adolescence may not only enhance existing knowledge but may facilitate research-based intervention and prevention programs at both the parental and adolescent levels and ultimately reduce the incidence and

consequences of this under-recognised, yet potentially debilitating disorder.

Keywords: *parenting styles, developmental problems, adolescents, underlying processes, anxiety*

The use of learning support assistants in inclusive education, in ACT public primary schools

D'CRUZ, R. (University of Canberra)

This study aimed to examine the role, effectiveness and alternate methods of deployment of Learning Support Assistants (LSAs) in ACT public primary schools. This qualitative study used the semi-structured interview format for data collection and the Thematic Analysis Technique (TAT) (Boyatzis, 1998; Braun & Clarke, 2006; Ely, Vinz, Downing, & Anzul, 1997; Silverman, 2004) for data analysis. In keeping with the principle of Triangulation (Patton, 1990) four different stakeholder groups were interviewed comprising three school principals, three learning support assistants, three special education teachers, and three parents who had children with a disability. Four sets of interview questions, adapted from a similar questionnaire by Giangreco, Broer, and Edelman (2002), asked each participant for their views on the role, effectiveness and alternate ways of deploying LSAs. Overall, common thematic findings were that the role of LSAs is not uniformly understood across the board. For example, LSAs are briefed and consulted about Individual Learning Plans only in some schools. However, LSA input at the time of reporting is sought by most special education teachers. LSA autonomy appears to depend on the teacher-LSA relationship. Further, LSAs are generally seen to be quite effective, though there are concerns that Students with Disabilities (SWDs) can become dependent on the support LSAs provide. Concerns were also articulated that the close proximity of the LSA to the SWD could inhibit the SWD's peer and teacher relations, and delay the SWD from commencing to work independently. Rostering LSAs so they get to work with different SWDs was suggested as a way of reducing SWD attachment to particular LSAs. It was also seen as a way of managing LSA

absences. Qualifications in Disability Studies and ongoing professional learning were suggested as ways to enhance professionalism in the LSA workforce. This study has highlighted the need for greater clarity around LSA roles and methods of deployment.

Keywords: *learning support assistants (LSAs), primary school, thematic analysis, students*

The use of restraint and seclusion on people with intellectual disability: A population study with implications for the reform of clinical practice

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The aim of the current study was to investigate the topography and prevalence of restrictive interventions in use with people with intellectual disability who exhibit behaviors of concern to community-based service providers; and also to develop a jurisdictional-wide strategy to promote the use of non-aversive evidence-based psychological alternatives, consistent with the UN Convention on the Rights of Persons with Disability and a Positive Behaviour Support (PBS) approach to intervention. A population database, established under the provisions of the Disability Act (2006) for the reporting of restrictive interventions (chemical and mechanical restraint and seclusion) by disability service providers, was analysed. A base-line measure of restrictive interventions was established. A literature review of alternative interventions was conducted and subsequently a range of practice alternatives established and disseminated. On-going monitoring of the population data base was conducted over a two year period to ascertain the impact of the reform process. At base-line, the majority of people who were subjected to restraint and seclusion were subjected to chemical restraint (96%). Time sampling indicated, regardless of restraint type, the use of restraint was routine rather than a strategy of last resort. Consistent with findings in the U.K and U.S.A., those subjected to restrictive interventions were more likely to be young males who were reported to have multiple disabilities, including Autism. The up-take and effect of the alternative strategies is

currently being assessed at the time of submitting this abstract, with data on these findings available over the next few months. Restrictive interventions, inconsistent with internationally accepted human rights and contemporary evidence-based practice, are currently used routinely to control people's behaviour. Systemic policy and procedural developments are needed to address these issues, together with a longitudinal study to evaluate the effectiveness, on a population level, of alternative, non-restrictive strategies. Population databases are useful, but have some limitations that need to be addressed to maximize their utility.

Keywords: *intellectual disability, restrictive interventions, Positive Behaviour Support (PBS)*

The work-family conflict and work ability relationship for an ageing demographic: examining the indirect effects of job satisfaction, family satisfaction and wellbeing

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The aim of this study was to investigate the effects of work-family conflict (defined as when the demands of one domain of either work or family interfere with the demands of the other) on work ability (defined as one's subjective and objective assessment of ability to work). Both work interfering with family demands (WIF) and family interfering with work demands (FIW) were measured to determine work-family conflict. The indirect effects of job satisfaction, family satisfaction and wellbeing on the work-family conflict and work ability relationship were also examined. A total of 128 participants were recruited for this study. The sample consisted of fulltime and part time workers from a public health organisation and corporate industries in Australia. Participants were required to complete a survey, either online or on paper. The results demonstrated that the Work Interfering with Family Life domain of work-family conflict was significantly related to lower levels of job satisfaction and wellbeing. Furthermore, personal wellbeing was a significant predictor of work ability. Finally, a

significant negative relationship was found between work interfering with family life and work ability, with wellbeing playing a partially mediating role in this relationship. The implications of these findings are in recommending strategies for promoting work ability for all workers. These findings can be used as part of a long term strategy to delay early retirement and retain ageing workers in the workforce. Implementing policies that reduce work-family conflict in organisations can help sustain economies by enabling ageing workers to continue working for longer periods of time.

Keywords: *work-family conflict, work, job satisfaction, family satisfaction, well-being*

The Young Learners Project: Associations between cognitive ability and aspects of early literacy knowledge and skills

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The Young Learners' Project is designed to investigate links between child and family characteristics, teacher effectiveness and early literacy knowledge in 4-5 year old children. In this study associations between children's early literacy understandings, as measured by a tool developed within the project, the Early Literacy Knowledge and Skills (ELKS), and intelligence, as measured by the Naglieri Nonverbal Ability Test (NNAT), are reported. Over a two-year period, 385 children completed the NNAT, administered by psychologists and supervised probationary psychologists, and the ELKS. These tests were administered on a one-to-one basis within the normal hours of the early learning and day care centres. Based on the early literacy developmental stages proposed by Ferreiro and Teberosky's (1982), item scores from the ELKS were analysed using item response modelling. Children were then grouped based on their developmental level in early literacy. One-way analysis of variance across four levels showed significant differences in NNAT standard scores between children who were at a lower level of early literacy development compared with those at a higher level, in both skills and knowledge areas. Consistent with previous research,

findings from the study suggest a relationship between cognitive ability and understanding of early literacy concepts in young children. Children who were more cognitively advanced appear to show greater knowledge and understanding of literacy concepts and print conventions. The findings provide support for individualised teaching in literacy for children with different cognitive abilities.

Keywords: *The Young Learners' Project, teacher effectiveness, early literacy knowledge, Naglieri Nonverbal Ability Test, children*

Theory of planned behavior (TPB), implementation intentions (IMIs) from unwanted inner states, study intentions and behaviors, and academic performance: An integrative model

BROONEN, J. (University of Liège)

Intention is considered as a key determinant of behaviour in goal theories and theories of attitude-behaviour relations (e.g., Theory of Planned Behaviour (TPB)). However, the intention-behavior relation is relatively weak, largely a consequence of people having good intentions but failing to act on them. A distinction must be made between forming an intention, a motivational process, and implementing it, a volitional one. Volition addresses the regulation of behavior after the intention has been formed. Problems of goal implementation involve action initiation or ongoing goal striving from getting derailed. Implementation Intentions (IMIs) are a specific volitional tool which consists of specifying an anticipated cue ('If' component) as a condition for initiating or protecting goal-directed responses ('then' component). These kinds of intentions lead to more frequent goal attainment compared to setting mere goal intentions. In the health domain, IMIs were specifically proved to increase the likelihood of realizing intentions when shielding ongoing goal pursuits from disruptive inner states. In the present field of research, it was investigated in the academic domain whether some inner states, which could impair study, could be specified in the 'if' component of IMIs and linked to an effective shielding response in the 'then'

part. These intentions were also assumed to trigger not only motivational control actions, but also intentions of learning behaviours and to mediate the effects of the classical variables of the TPB on academic performance. 207 freshmen students completed longitudinal questionnaires and Structural Equation Modelling was employed (Lisrel; *Robust Maximum Likelihood Method*). IMIs geared at controlling interfering motivational inner states enhanced the rate of actions protecting goal-striving and triggered intentions of learning strategies, which were positive antecedents of study behaviors. IMIs totally mediated the effect of classical variables of TPB. The whole model increased the amount of explained variance of academic performance above the contribution of the constructs of the TPB ($R^2 = .35$). In the academic domain, use of unwanted motivational inner states as initiators of goal-shielding responses through IMIs maximizes the effects of simple intentions to make good marks. IMIs are also a self-regulating tool capable of inducing intentions and behaviors of applying learning strategies, which are positive antecedents of academic performance.

Keywords: *theory of planned behaviour, implementation intentions (IMIs), goal theory, academic performance*

Thinking is advisable. Especially when dealing with complex problems

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Recent findings have led to the claim that non-conscious processing is superior to conscious deliberation in complex decision-making [Dijksterhuis, A., Bos, M. W., Nordgren, L. F., & Van Baaren, R. B. (2006)]. We dispute this claim and argue (a) that in that study (Exp. 1 & 2) no genuine non-conscious condition existed and (b) that the participants were forming attitudes rather than solving a problem and (c) that the task that meant to be more complex, was in fact no more complex than the other task. Participants were exposed to attributes of choice alternatives, for a duration long enough for encoding, but not for analyzing the information. After initial attributes exposure,

half of the participants engaged in conscious deliberation and half were distracted with an anagram task. In Exp. 1 half of the participants evaluated cars from a subjective perspective (attitude formation), and the others evaluated them from the perspective of another person's preferences (problem solving). In Exp. 2 participants evaluated vacation packages from the point of view of a travel agent doing work for a customer. For half of the participants, the parameters underlying the customer's preferences were additive (simple problem), whereas for the other half they interacted (complex problem). In Experiment 1 we found that participants who were given four minutes post-exposure to consciously deliberate made better criteria-fitting decisions than those who were given a distracting task. We also found that participants engaged in attitude formation were less accurate than those solving an impersonal problem. Importantly, increasing the number of attributes hampered performance in the problem solving but not in the attitude formation task. In Experiment 2 participants consciously deliberating after exposure solved impersonal problems better than the distracted participants and this effect was pronounced in the more complex task. We suggest that in problem solving tasks, conscious processing is superior to non-conscious processing, particularly in complex problems, where optimal allocation of resources is essential.

Keywords: *information processing, complex decision-making, problem-solving*

Time elapsing since last use of cannabis: Implications for measures of IQ

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Over the past decade evidence has emerged concerning impaired cognitive performance related to the use of cannabis, and of a withdrawal syndrome arising from the cessation of its use. However, little is known about any

long-term effects on cognitive abilities which may be related to cannabis use. The neurotoxic properties of cannabis make this an important question. This paper examines the relationship between time since cessation of cannabis use and performance on the Ravens Progressive Matrices IQ test. Ravens Matrices Set E scores were obtained from 59 cannabis users (mean age = 23.0 years, $SD = 3.8$ years), with a median lifetime use of 72 joints (1st quartile = 15, 3rd quartile = 760 joints). Participants had been abstinent from cannabis for at least seven days, with a median of 66.5 days (1st quartile = 14.3, 3rd quartile = 615.5 days) since last use. Measures of substance use history, mood, and demographics were also obtained. Tertile groups were based upon time since last cannabis use, with cut offs at 22.3 and 269.3 days. Mean Set E scores progressively declined across tertiles. One-way ANOVA with simple contrasts showed a significant difference between the first and third tertile. Using multiple linear regression analysis, 21.2% of variability in Set E scores was explained by a highly significant predictive model containing self-reported arousal scores, transformed measures of time since last cannabis use, and onset age for cannabis use, respectively. Only time since last use was inversely related to Set E scores, and explained the largest respective portion of variability in these scores (10.6%) for the three predictors. In separate analyses, Set E scores were uncorrelated with estimates of cannabis and ecstasy consumption, but approached significance in their negative correlation with time since last ecstasy use. Improvements in cognitive functioning should not be assumed when cannabis use is ceased. There is mixed evidence from relatively few studies regarding the course of cognitive functioning following cessation, so that a need for longitudinal and prospective studies is indicated. Potential causal mechanisms for changes in performance levels also require further investigation.

Keywords: *cannabis use, impaired cognitive performance, withdrawal syndrome*

To conserve or not to conserve? Determinants of household water use in South East Queensland

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The current paper encompasses a review of the psychological literature on household water conservation and an empirical study of the social and psychological determinants of household water efficiency (i.e. installing water efficient appliances) and curtailment (everyday water conservation practices) behaviours. The empirical study draws on an expanded theory of planned behaviour (TPB) model that incorporates aspects of social identity theory (household identity) and norm focus theory (descriptive and injunctive norms). A review of empirical psychological literature on water conservation identified key predictors of household water conservation and limitations of current methodologies. As part of the empirical study, 1750 households in South East Queensland completed a survey (either online or via the post) measuring variables of the expanded TPB model and self-reported water efficiency and curtailment behaviours. Additionally, for consenting households, actual water use records were obtained from the relevant city council. Where possible, multiple adults in a household responded to the survey ($n=195$). A sub-sample ($n=320$) of the larger sample also agreed to installation of high resolution meters in their home so that survey responses could be linked to specific water use around the home. The review of existing literature suggests the importance of demographic factors, water use habits and environmental knowledge and priorities as determinants of actual household water use. It is clear, however, that much of the past research has measured intentions rather than actual water use and that the research has tended to rely on individual data despite the reality that water use is often a collective activity. Drawing on the survey data, key predictors of water use intentions and actual water use will be discussed

(including multi-level analysis of data from households with multiple respondents). In light of the vulnerability of freshwater resources for urban populations and the likelihood that existing pressure will be exacerbated by climate change, managing urban water demand is an important strategy for water policy-makers. By drawing on established psychological theories to identify the key psychological and social drivers of household water use, and ensuring objective measurement of household water use, the current research can provide valuable information to ensure the development of effective policy in this area.

Keywords: household water conservation, efficiency, curtailment, theory of planned behaviour, psychological determinants

Trade-off in object versus spatial visualization abilities: Restriction in the development of visual processing resources

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Previous research indicates relative independence between the ventral and dorsal visual pathways, associated with object and spatial visual processing, respectively. The aim of the current research is to investigate the relationship between Object Visualization Ability (the ability to process visual information about objects or scenes in terms of color or shape) and Spatial Visualization Ability (the ability to process information about spatial relations between objects and perform spatial transformations). We investigated the relationship between the object and spatial visualization abilities of five different age groups of participants whose ages corresponded to their amount of specialized training, ranging from none or very little to extensive. The first and second groups of participants consisted of younger children (ages 10-13) gifted in visual arts, sciences, or humanities that had not yet received area-specific training and older children (ages 14-17) who had begun to receive such training. The third and fourth groups consisted of undergraduate and graduate college students, all of whom majored in visual art, science, or

humanities. The fifth group consisted of members of different professions. All the participants were administered a number of object and spatial visualization ability tests. Across five different age groups with different professional specializations, participants with above-average object visualization abilities (artists) had below average spatial visualization abilities, and the inverse was true for those with above-average spatial visualization abilities (scientists). No groups showed both above-average object and above-average spatial visualization abilities. Furthermore, while total object and spatial visualization resources increase with age and experience, the trade-off relationship between object and spatial visualization abilities does not. These results suggest the existence of a trade-off between object and spatial visualization abilities and that the trade-off originates through a bottleneck, which restricts the development of overall visualization resources, rather than through experience in one type of visualization.

Keywords: *object visualization ability, spatial visualization ability, age*

Training empathy: A review and meta-analysis of empirical studies

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In counselling and psychotherapy, the concept of empathy is widely regarded as one, if not the most important, quality of effective therapists. However, the possibility to develop empathic abilities in training programs is also highly relevant outside therapy and has led to a substantial number of studies measuring the effectiveness of empathy training. This meta-analytic study aims at evaluating how effective training in empathy is. Based on a comprehensive literature review and relevant literature databases (PsycArticles, PsycInfo, SocIndex, ERIC, Medline, CINAHL), this contribution presents results of a meta-analysis of over 100 controlled studies on the effectiveness of empathy training programs. Only studies fulfilling high scientific criteria were included and comprehensively coded. Studies on

empathy training were conducted with such diverse groups as students, health professionals, school and preschool children, couples, parents, older persons, and persons in the forensic field. The meta-analysis shows that empathy training has a stable and medium-size effect on increasing empathy of participants. We analyze and discuss possible influences on the effectiveness of empathy trainings. Limitations of these trainings are discussed which future practitioners and researchers of empathy trainings should consider.

Keywords: *empathy, training programs, psychotherapy, counselling*

Trajectories to delinquency: The significance of reputational orientations to primary, high school and incarcerated adolescent loners and non loners

HOUGHTON, S. (The University of Western Australia), CARROLL, A. (The University of Queensland)

The present study aims were to (i) establish the nature of delinquent activities and reputational orientations among loners who reportedly commit delinquent acts without an audience being present; (ii) compare the delinquent and reputational orientations of loners with non loners; and (iii) establish the applicability of reputation enhancement theory with loners. Two scales the Adapted Self-Report Delinquency Scale (ASDS) and the Reputation Enhancement Scale (RES) were administered to 886 primary and 965 secondary school students and 108 incarcerated participants. Participants were classified as loners or non loners using the sociability scale of the RES. The ASDS and RES were also administered to 98 secondary school loners who were then age and gender matched with non loners to conduct a more stringent investigation. Multivariate analyses of variance revealed no significant main effect of delinquency in the large sample according to loner status. There was, however, a main effect for reputational orientations. The more stringent examination using a closely matched sample of 98 pairs of loners and non loners revealed that loners reported significantly higher levels of involvement in physical aggression, stealing

offences, and vehicle-related offences than the matched non loners. For reputation, overall, loners were less likely to perceive themselves as socially conforming and did not wish to be seen as socially conforming by others. Furthermore, they were less likely to describe themselves in terms of positive activity and power attributes, and did not want to be perceived by peers as possessing positive attributes. Moreover, loners were less willing to communicate their prosocial behaviour to friends, parents, and/or other adults. Social visibility and the committing of delinquent acts in the company of others (i.e., an audience) are NOT key elements on which loners build their reputations. Loners hold discrepancies about their actual and ideal selves than do non loners and this may offer opportunities for positive peer interaction based intervention strategies.

Keywords: *delinquents, reputational orientations, loners*

Translating health research into practice: It's not just a matter of "communication"

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To investigate differences in the ways health researchers and practitioners engage with the world and the implications for research translation. Analytic study based on some observations emerging from Individual and group interviews with an interlinked set of behavioural science researchers and practitioners, including practicing psychologists. Actor-Network theory (ANT) was employed to theoretically integrate the interview data. The original purpose of the study was to identify barriers to research translation, and this paper concentrates on an important, but less obvious barrier. One difference, in particular, was striking. When talking about their work, researchers and practitioners used different "practical ontologies", making them sound as if they operate in two different realities. Researchers talked about protocol design, reliability and validity, conceptual rigour and, especially, about the robustness of the causal relationships either assumed, or hypothesized. Personal and interpersonal processes (e.g.

getting grants, managing surveys) were seen as enabling or supporting their engagement with a predominantly conceptual reality. On the other hand, practitioners talked about specific people, what they did, why they did it and when they did it. Causal processes were unambiguously personal and interpersonal. Knowledge, concepts (e.g. models of cessation) and evidence (e.g. survey results) were seen as supporting their engagement with a predominantly interpersonal reality. Such ontologies emerge, not because of differences between the individuals involved, but because researchers and practitioners are engaged in two very different work processes, and as a consequence they are enmeshed in different worlds. It is not simply a matter of stylistic, personal or epistemological preferences. Unless we are sensitive to these differences our attempts to translate health research into practice will be less effective than they could be. While the focus of this inquiry was to inform tobacco control interventions, we believe these results can be generalised to other intervention related research.

Keywords: *communication, Actor-Network Theory, translation*

Treating arson offenders – challenges, pitfalls and joys

DOLEY, R. (Bond University)

With heightened community focus on the issue of arson prevention and management in our community, work has commenced on developing a best practice approach to the treatment of convicted arson offenders. This paper will present the results of an extensive enquiry into current practice internationally and domestically which has culminated in an intervention approach designed for treatment of adult arsonists in institutional settings. Reference will also be made to the modifications and specific treatment targets indicated for community based interventions with this population. Currently in Australia there is no standardised treatment modality designed specifically to address the unique demands of intervention with adult deliberate firesetters. A proposed model for best practice treatment and

management for this population will be presented based on the evidence available currently.

Keywords: *arson offenders, treatment, prevention, community based interventions*

Trialing organisational integration between UK health and social care services in the context of whole system working: A quick fix or an enduring challenge?

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Irrespective of its theoretical and empirical infancy, the whole system working concept has managed to become already an international health policy imperative and an ethos proclaiming benefits in the 'joining' up of individual parts of system(s) in organisations that traditionally have worked in separatist or even competitive ways. In the case of UK health and social care organisations, the idea that service delivery should be redesigned under a whole system approach has been largely supported by the fact that patient groups rarely fit neatly within one set of professional groups and organisational boundaries (Hudson, 2006). Focusing on findings from a DoH change programme, the present paper discusses the pragmatic challenges in the deployment of assistive technologies within the current separatist organisational climate. The paper does not focus on the study of this innovation as a technological artefact but as an organisational one (e.g. tensions experienced at the managerial and service provider levels). Semi-structured interviews ($N= 90$) were carried out with stakeholders in health and social services who participated in the programme. The results corroborate that implementing remote care services in a whole system context is a complex endeavor. Successful implementation requires collaborative thinking, inter-organisational communication, the re-evaluation of organisational approaches in the delivery of care, and personal and organisational flexibility to new opportunities. The aims of the programme and its visions were framed within a

patient centred discourse which in most instances was perceived by the multiple stakeholders as a mean of dealing with or silencing conflict. Issues of asymmetrical power amongst the organisations were also apparent. The study will increase our understanding of how whole system working concept is perceived and enacted and how complex organisational innovations across health and social care can be successfully implemented and managed.

Keywords: *organisational integration, social care services, organisational climate, communication, conflict*

Tripartite security system of attachment, self-esteem and worldview and the threat of terrorist attack

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To provide a better understanding of the way people develop and cope with fear and trauma, this study examines the relationship between mortality salience, worldview anxiety salience as perceived threats and subsequent attachment-related anxiety and attachment related avoidance associated with threat of terrorist attack. 232 individuals (primarily university students) were allocated randomly to one of the three conditions of writing a paragraph regarding their feelings associated with experiencing a terrorist attack, keeping a pet or facing their own death. The participants responded to a series of questionnaires that tapped into the following variables: desire of close relationship, self-enhancement regarding independent and interdependent traits, feelings towards members of other cultures. Results of this study partially supported the prediction of integration of the defence mechanisms in the tripartite security system model and the role of attachment style on defence mechanisms. This research showed that people that are affected by a stressful event activate their tripartite security system and their attachment style determines which defence mechanism is enhanced or suppressed. The results also showed that to cope with an unavoidable stressful event, establishing and maintaining secure attachment style may be an appropriate strategy. The study found that people's

attachment styles enhance or suppress activation of defence mechanisms regardless of them experiencing fear or trauma. The study challenges Hart, Shaver and Goldenberg's (2005) tripartite security system model.

Keywords: *fear, trauma, terrorism, anxiety, attachment*

Undergraduate psychology training and workplace needs: Student perspectives on the extent to which their education prepares them for their chosen career

STOYLES, G. (University of Wollongong), CAPUTI, P. (University of Wollongong), BYRNE, M. (University of Wollongong), CROWE, T. (University of Wollongong)

The current study surveyed 195 first to fourth year psychology students at a regional university in New South Wales about the amount of applied content in undergraduate psychology training and post-graduate opportunities for employment as a psychologist. Eighty-nine percent of students believed that the level of applied psychological training was either non-existent or inadequate, and therefore did not equip them for finding work as a psychologist. Ninety-six percent of students who wished to become intern psychologists believed that opportunities for working as intern generalist psychologists were either non-existent or insufficient. Concerns around employment and registration opportunities reflected this group's disillusionment with undergraduate training. Availability of work-place supervision and associated worry about paying for alternative private supervision was also evident. Recommendations for further investigation of the 'goodness of fit' between undergraduate psychology training and the ability of students to be competitive in the workplace following graduation will be articulated.

Keywords: *students, undergraduate psychology, employment, supervision*

Understanding client perceptions of the therapeutic relationship: A phenomenological investigation

DI MATTIA, M. (Monash University)

The aim of this paper is to present the results of an empirical research study exploring client perceptions of the relationship with their therapist, within the first five sessions of therapy. The presenter will explore the rationale for this study, including the significance of investigating clients' perspective on the therapeutic relationship in the early stages of therapy. The major results of this study and the implications in understanding the therapeutic relationship will be discussed. This study utilized a qualitative methodology to closely explore client perceptions of the therapeutic relationship, with the aim of identifying those aspects of the relationship clients find helpful and unhelpful. Three participants were interviewed on two occasions about their experiences of the relationship with a therapist. The data was analyzed using an empirical phenomenological approach and the researcher utilised a third party verifier to enhance the validity of the analysis. Themes were derived for each participant that reflected an aspect of their perception of helpful and unhelpful characteristics of the relationship with their therapist. The major results that emerged from this study, common to all participants was an interest in the personal life of the therapist, linked to participants' awareness of the boundaries of the relationship. Each participant expressed hesitation and uncertainty about what the boundaries of the relationship with a therapist are. An awareness of the role of the therapist and the importance of perceived trust and understanding were also major findings from this study. This study highlighted clients interest in the personal life of their therapists and it is suggested that future research is required to explore what it is clients' want to know about their therapist and clients' understandings of what the boundaries of the relationship are. Further research is also required to explore what it is clients see the role of a therapist and how this is connected to the quality of the relationship and perceived experience of a therapist.

Keywords: *therapeutic relationship, boundary, trust*

Understanding driver anger and aggression: Attributional theory in the driving environment

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Much of the aggressive driving displayed on our roads and highways is the result of driver anger and retaliation for a perceived driving offence. Theories of attribution depict the general process by which individuals explain the events around them, and may provide some insight regarding aspects of driver behaviour or the roadway environment that elicit aggression. The current two studies tested the applicability of Weiner's (1995, 1996) attributional model of social conduct to the roadway environment. Study 1 employed written scenarios where participants were asked to imagine themselves driving on a major highway. The vignette described another driver who cut in front of the participant causing him or her to brake suddenly. The degree of Controllability and Intentionality of the driving act was experimentally manipulated by altering the specific event-related details provided to the participants. Study 2 involved participants completing on-line driving diaries every two days, identifying their most negative/upsetting encounter with another motorist. After completing four diaries, the most anger-provoking event from the diary entries was selected and participants were asked to respond to a questionnaire similar to that used in Study 1. Path analyses in both studies generally demonstrated the hypothesized relationships proposed by Weiner's model and confirmed the model fit. Specifically, perceived Controllability, Intentionality, and Locus of Causality were associated with judging the offending driver as responsible for the negative driving event. Judgments of Responsibility were associated with more anger and with less sympathy (in Study 2 only). Anger was associated with aggressive behaviour in response to the offensive act, whereas sympathy was associated with prosocial behaviour. Recommendations will be offered for improved driver safety including the development of attributional retraining programs, teaching novice drivers about both formal and informal roadway communication,

and the promotion of forgiveness in the driving environment.

Keywords: *attribution theory, driving behaviour, anger, aggression*

Understanding knowledge sharing in organizations

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The purpose of this paper was to empirically study the influence of four psychosocial variables and four organizational conditions of knowledge sharing behavior. The psychosocial variables are: attitude, subjective norms, self-efficacy and perceived value of knowledge. The organizational conditions are: organizational learning culture, training, strategic clarity and organizational support. Quantitative data were obtained from 1057 participants, 55.7% female and 44.3% male, all of them knowledge workers. An instrument of 50 items was designed and validated using Rasch's model. The items of the instrument were answered by research participants using a Likert scale of seven levels of response. The data showed a relationship between the studied psychosocial variables and organizational conditions and knowledge sharing behavior. A model was proposed using structural equation modeling. Knowledge sharing is the spine of organizational learning and knowledge management. This research contributes to the understanding of the human side of knowledge management. A new concept called *perceived value of knowledge sharing* is proposed and discussed. A study of the relationship between the perceived value of knowledge and knowledge sharing is suggested.

Keywords: *psychosocial variables, knowledge sharing behavior, subjective norms, organisational learning, support*

Understanding moves in task conflict: A framework integrating self salience and opponent's stance

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A framework based on a dual party approach is proposed to understand interpersonal task conflict. It integrates both personal and opponent factors in understanding moves of a conflict party. Drawing from the literature in conflict and self salience, we posit that both self-enhancing and complementary mechanisms could explain conflict moves. The former mechanism is associated with personal self salience whereas the latter with relational self salience. The exact direction of conflict moves, however, depends on the interaction between the self salience of an individual and the stance of his/her opponent. Two studies were conducted to test the proposed framework. In Study 1, 165 participants completed a scenario questionnaire describing a conflict situation. Stance of the opponent was manipulated in the scenario whereas participants' trait self salience was measured. In Study two, 94 participants engaged in a discussion task with another participant on the computer. The task was in fact an experimentally induced conflict situation in which the opponent's responses were programmed. Both of participants' self salience and stance of the opponent were manipulated whereas trait self salience was also measured. In Study one, participants' perceived dominance in the conflict scenario was found a function of trait self salience and opponent's stance. When participants' personal self was salient, their perceived dominance remained high regardless of the opponent's stance. When participants' relational self was salient, their perceived dominance in conflict was high when facing a submissive opponent but was low facing a dominant opponent. In Study two, an interaction between trait and primed self salience was found. Primed self salience produced the hypothesized pattern in behavioral conflict moves as in Study one, but only among participants whose trait personal self salience was low. The results echo with recent findings regarding self priming and social behavior. Results of the two studies supported the notion of using self-enhancing as well as complementary mechanisms to understand moves in task conflict. The present framework treats interpersonal conflict as a dynamic system such that a conflict party's actions should be an interaction between factors from the two parties involved. The framework also provides an alternative to existing theories of conflict

processes that mostly adopt a single party approach in explaining conflict processes.

Keywords: *conflict, self salience, opponent's stance, priming*

Unraveling the role of different forms of autonomy and demands for creativity and health at work

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Innovation and creativity are competitive factors in a globalized economy. However, pressure to innovate leads to detrimental working conditions and a growing rate of mental-health problems. Review of literature and pilot studies showed that well-known health-promoting working conditions – namely, autonomy and variety of job demands – may also have a beneficial effect on creativity. The aim of the study is to get a more differentiated understanding of the role of autonomy, with its theoretically-derived facets of decision-, action-, and design latitudes, and job demands on employees' health and creativity as performance indicator. 228 employees from companies with high demands on creativity answered questionnaires on different facets of autonomy, job demands and job stressors. Health indicators were assessed according to a threshold model of 'mild' (psychological) to manifest (psychosomatic) disorders. Creativity was examined by self-rating and – for a subsample of 160 employees – validated by supervisor assessments. Structural equation modelling was used to analyze the differential impact of forms of autonomy and job demands on health and performance outcomes. A second ongoing survey (currently, 194 employees, 4 companies) is used for cross-validation. Although the different facets of autonomy are interlinked, especially design latitudes show a strong relation to higher creativity and lesser irritation. Moreover, job demands have a clear impact on creativity. Irritation can be seen as an early indicator of health impairment and the starting point of a chain of progressively severe health problems. Structural relationships are cross-validated by means of the second survey sample.

Results show the relevance of a differentiated analyses of work (e.g., discerning facets of autonomy) and health (according to a graded threshold model). They pinpoint specific implications for work design that promotes both health and creativity of employees.

Keywords: *innovation, creativity, autonomy, job demands*

Urban vs. rural differences in attitudes affecting dangerous driving behavior: An application of structural equation modeling

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Death rates from highway accidents for rural populations are markedly higher than similar rates for more urbanized populations. The question is raised concerning a possible “culture of bad driving attitudes” on the part of the rural population. The paper seeks to explore differences between urban and rural populations in terms of the relationship among factors representing component elements which are known to affect the propensity to drive in a dangerous manner. The research applied a series of methods which included principal component analysis, confirmatory factor analysis, and structural equation modeling to build a model of the interaction among five latent factors for the full sample ($n=1040$) drawn from three adjacent states in the USA. The five latent factors were derived from 18 directly observed manifest variables. The model was applied on a multi-sample basis for a subsample of rural respondents ($n = 483$) and a subsample of urban/suburban respondents ($n = 557$.) The survey instrument was designed to reveal patterns such as sensation seeking, denial of risk (reflecting optimism bias); social norm, objective norm and acceptance of the efficacy of speed, among other hypothesized factors. A factor representing dangerous driving was derived from five self-reported behaviors, drawn from the Driver Behaviour Questionnaire. The model produced an adequate level of fit to the data; (RMSEA=.026, CFI=.97 TLI=.96.) The hypothesis

of a possible “culture of bad driving attitudes” on the part of rural drivers was not supported by the research. A comparison of the parameters (beta coefficients) calculated for the two samples suggests that, for the rural sample, the factor representing denial of risk is significantly more important in predicting dangerous behavior than the factor representing sensation seeking, while denial of risk is somewhat less important than sensation seeking for the urban sample. Factors representing the role of social norm and desirability of speed did not vary between the two sub-samples. The observed difference in roles of sensation seeking and denial of risk became more pronounced when additional segmentation was undertaken to reveal differences between rural males under age 30 and their urban counterparts. No differences in the role of the two factors were attributable to gender. The possibility that bad driving behavior in rural populations is associated with problematic attitude factors different from those in urban populations should be examined further, with a database based on a wider geographic area. If the pattern is confirmed in further research, the implications of the differences between attitude factors should be examined for possible integration into the development of context specific strategies to improve driving behavior.

Keywords: *attitudes, dangerous driving behavior, rural populations, urbanization, culture*

Use of an extended protection motivation theory (PMT) to examine change in walking episodes and saturated fat consumption in patients treated with percutaneous coronary intervention

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The present study aimed to examine the utility of the Protection Motivation theory-*plus* (PMT_{plus}) model in predicting change over six months in health behaviours in patients who had undergone a first Percutaneous Coronary Intervention (PCI). In total 218 patients consecutively admitted for first PCI were

included in the study. Walking and saturated fat consumption and PMT scales along with a 'future distress' scale to enable investigation of the PMT*plus* model were administered via telephone shortly after discharge and again six months later. Results indicated that walking episodes increased significantly over time, while saturated fat consumption remained stable over time. Significant main effects for time were evident for all PMT*plus* measures with the exception of exercise self efficacy. Future distress was the only PMT*plus* component that decreased over time. The addition of 'future distress' significantly improved the predictive power of the PMT model. In total the PMT*plus* walking model explained 21.7% of the variance, while the PMT*plus* dietary model explained 16.5% of the variance. Age group, change in exercise self-efficacy and change in future distress made significant unique contributions to the prediction of change in walking episodes after PCI. Dietary vulnerability and change in future distress made significant unique contributions to the prediction of change in saturated fat intake. Overall these findings point to the PCI patients undergoing a process of adaptation to their CHD over time. The PMT*plus* model provides a useful model of cognitive and emotional appraisal. Findings point to the importance of providing psychological support to patients alongside advice regarding behaviour change.

Keywords: *protection motivation theory, percutaneous coronary intervention, exercise, future distress*

Using a novel method of measuring knowledge acquisition and bias to evaluate the effectiveness of 'active learning'

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This study had two aims: 1) to compare the effectiveness of 'active' and 'passive' learning in undergraduate students, and 2) to evaluate a new assessment technique that uses signal detection theory to give an indication of not only how much students know but also their

tendency to accept or reject information that they hold (bias). Two different psychology practical sessions investigating visual illusions were prepared in either an active or passive format. In the active session students worked in groups and were given free use of the web; although with certain suggested websites. They were given the illusions to explore and the aim of the session was to discover the answer to certain general questions. In the passive sessions the students worked individually and did not have access to the web or the actual illusions-although they were given printouts of all material from the suggested websites, thus providing all the information needed to answer the questions posed. Each group of students did one active and one passive session. The order of presentation of the active and passive sessions was counterbalanced across groups. After the students had completed both sessions, they were tested on the material using a series of true/false statements. The data were then analysed using an assessment technique based on signal detection theory to give a score for how much each student knew and also a measure of their bias (see above). 2 x 2 mixed ANOVAs with active or passive session as the within participants variable and session topic as the between participants variable, were conducted on the knowledge and bias scores. For the knowledge scores there was a significant main effect of which topic was the active one ($p = 0.012$). For the bias scores there was a significant interaction between session topic and the effect of active Vs passive learning ($p = 0.002$). Considering only the knowledge scores, it appeared that passive learning was more effective, but was heavily task dependent. Consideration of the bias scores, however, suggested that the high knowledge score was at the expense of a lax bias representing a tendency to accept false information as true. Overall, it appeared that active learning was less affected by the task, and participants in the active conditions appeared better 'calibrated' (less bias). An interesting finding was that, over all the participants, there was almost no correlation ($r = 0.004$) between their scores in the active and passive conditions suggesting that different participants performed better in active or passive learning situations suggesting that different learning types may suite different people.

Keywords: *knowledge acquisition, active learning, bias, active learning, passive learning*

Using latent trait modeling to inform the DSM-V classification of Generalized Anxiety Disorder

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DSM-IV identifies discrete diagnoses. Lists of observable indices are used to assess latent disorder processes, but can DSM be a valid classification if it measures largely unobservable phenomena? There are no laboratory tests for most psychiatric disorders. There is no gold standard to measure the classification against. DSM has thus depended on reliability rather than validity to justify the parceling out of categorical diagnoses. The revision of DSM-IV is underway. The retention of a predominantly categorical classification is one of the greatest challenges to the validity of DSM-V. The alternative to such a classification is one that includes or wholly replaces this binary system with some form of dimensional assessment. A paradigm shift towards a more dimensionally based classification would increase the validity of DSM by reflecting the latent structure of disorders in the organization of diagnoses. Robust support for including dimensional measurement in DSM-V on this premise does not exist for all DSM-IV diagnoses. Evidence for incorporating diagnosis-specific dimensional assessment is limited particularly for Generalized Anxiety Disorder (GAD). This is the first study to investigate whether DSM-IV GAD criteria are graded markers of latent dimension(s) of pathology. The lifetime experience of DSM-IV GAD symptoms was assessed in 1,632 community respondents of the 2007 Australian National Survey of Mental Health and Well Being. Respondents who had experienced sub-threshold and threshold GAD symptoms were included in the sample to examine the relationship between DSM-IV diagnostic criteria and the latent structure of the disorder. The comparative model fit of unidimensional and multidimensional latent trait models was tested. These dimensions were then externally validated. It was found that a third of the sample reported threshold criteria for GAD. Based on the full information factor analyses, increasingly multidimensional solutions provided superior fit

to a unidimensional conceptualization of the disorder. The DSM-IV criteria are graded markers of the interaction of these dimensions. Therefore, this study supports considering the inclusion of diagnosis-specific dimensional assessment of GAD in DSM-V. How these results could be used to establish categorical and dimensional diagnostic thresholds will be discussed.

Keywords: *generalised anxiety disorder, latent trait modeling, classification*

Using mixed distribution models to test the construct validity of the physical self-description questionnaire

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The Physical Self Description Questionnaire (PSDQ) (Marsh et al, 1994) is an internationally established instrument to measure the physical self. To test the psychometric quality of the PSDQ, confirmatory factor analyses (CFA) and multi-trait multi-method (MTMM) analyses have been conducted as well as item response theory (IRT) models (e.g. the Samejima-model). Probabilistic mixture distribution models such as the Mixed-Rasch-Model (MRM, Rost, 1990) have not been used so far. They allow us to identify different groups of people (latent classes) which the Rasch model holds, but with different item parameters. The MRM is an IRT model which combines the properties of latent class models with the Rasch model (as latent trait model). The PSDQ consists of 70 items which measure eleven subscales. Subjects respond on a six-point scale. The sample of this study constituted $N = 568$ students (mean age = 27.06; male $n = 236$). The results indicated acceptable goodness of fit indices for the 11 factor solution ($\chi^2/df [1585.87/505] = 3.14$, TLI = .93, CFI = .94, RMSEA = .06, SRMR = .05). The inter-correlations varied between $r = 0$ -.75. To test the unidimensionality of the 11 scales, 11 separate confirmatory factor analyses were conducted. CFAs for each single scale almost always produced an inadequate model fit. Analyses of each of the 11 scales using the Mixed-Rasch-Model (MRM) confirmed this lack of unidimensionality, showing that the

best fit indices were almost always for a two-class solution. Approximately 30% of respondents did not complete the scales according to the given ordinal response format. As a result, their data has to be interpreted in terms of response tendencies and not in terms of content. The other 70% of respondents generally revealed unidimensionality in the sense of the specific construct. These detailed MRM analyses reveal the reason for the frequently observed lack of unidimensionality in the single scales: The PSDQ is inappropriate for assessing the specific assumed underlying dimension in a relatively large proportion of persons (approx. 30 %).

Keywords: *construct validity, physical self description questionnaire, latent class models*

Using negative and positive social feedback from a robotic agent to save energy, the moderating roles of feedback relevance and multiple goal activation

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Sustainable living is to a large extent the outcome of how consumers use the technology surrounding them. Seen from this perspective the rather strict separation of technological and behavioral solution is not only artificial but also detrimental to finding real sustainable solutions. Persuasive technology aims to intervene in these user-system interactions by using intelligent agents to change human attitudes and behavior. In the present paper, we explore the persuasive effects of social feedback, as provided by a robotic agent, on behavioral change. In two recent studies we showed that robotic agents are capable of exerting social influence on the behavior of users of household appliances by providing positive and negative social feedback (approval vs. disapproval). In the present paper we focus on the self-regulatory role of negative social feedback and demonstrate the effects of feedback-task relevance and multiple vs. single goal activation as moderating factors on the effects of both types of feedback. Two lab experiments will be presented that analyze the effects of task relevance of the feedback and the role of single vs. multiple goal activation. The

experimental setup was largely based on the appliance simulation paradigm, which was developed and validated in a series of prior experiments on the topic. In this setup subjects make task decisions while engaged in the use of certain appliances, for example programming a washing machine. This setup makes it possible to study feedback processes and behavioral effects in a well-controlled lab environment. MANOVA analysis showed that social feedback by smart agents was more powerful than non-social factual feedback as provided through the user interfaces of appliances. In addition we showed that negative social feedback could produce more behavioral change than positive social feedback. Finally, we found that this valence effect was moderated by task relevance of the feedback and by single vs. multiple goal activation. The paper concludes that smart agents embodied by a robotic system are capable of persuading human users through mechanisms of social influence. Apparently humans are sensitive for social feedback even if this originates from a non-human source. Negative feedback is effective in achieving behavioral change suggesting the importance of negative feedback in self-regulation. The moderating effects of task relevance and multiple goal activation further strengthen the self-regulation explanation of feedback valence. Finally theoretical and practical implications of the findings will be discussed.

Keywords: *sustainable living, technology, social feedback, behaviour change, robotic agents*

Validity of cognitive workload indexes: An analysis of eye movements during interruption handling

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The aim of the current was to conduct an exploratory study of the sensitivity of eye movements-based cognitive workload indexes to cognitive load manipulations in the context of interruption handling. 65 subjects (aged 18-23, mostly female) took part in an experiment simulating interruptions during computerized office work. The complexity of interrupted and interrupting tasks was manipulated within subjects. The presence of an interruption lag

(which is a factor shown to decrease the cognitive complexity of interruption handling) was manipulated between randomly selected halves of the sample. Various eye movements-based indexes of cognitive workload were registered during different phases of interruption handling. As expected, most of the workload indexes were sensitive to the interruption lag presence (p s between 0.023 and 0.186, p s below 0.2 were considered significant according to the exploratory nature of the study). Two notable exceptions were blink rate and pupil dilation. The interactions of the complexity factors with the interruption lag factor were also assessed because the presence of the interruption lag allows for the employment of special cognitive-behavioral interruption handling strategies. Such strategies may decrease the cognitive load associated with the complexity factors and thus their employment should be reflected in a valid index of cognitive workload. The interactions were systematically found for fixation duration (p s between 0.061 and 0.179). Complexity factors had no effects on fixation duration in conditions with interruption lag, but there were clear complexity effects in conditions with no interruption lag (there was an increase in mean fixation duration in more complex interruption episodes). This is the first study to assess the validity of cognitive workload indexes related to eye activity in the context of interruption handling. Increase in fixation duration was shown to be the most sensitive index of cognitive workload. The use of pupil dilation as an index of cognitive workload in ecologically valid setting should be avoided.

Keywords: *cognitive workload indexes, interruption handling, eye movement, validity, cognitive complexity*

Value orientations, perceived risks and benefits, and acceptability of nuclear energy

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Acceptability of an increase in the supply and use of nuclear energy is most likely not based on purely objective risks such as expected

morbidity. Subjective aspects of risks, such as specific beliefs on costs and benefits of nuclear energy, play an important role in supporting or opposing an increase in the supply and use of nuclear energy. These beliefs are rooted in values. Therefore, this study focuses on which values and beliefs can explain the acceptability of an increase in the supply and use of nuclear energy. Respondents completed questions on egoistic, altruistic and biospheric values, perceived risks and benefits of nuclear energy, and the acceptability of an increase in the supply and use of nuclear energy in the Netherlands ($N=123$). We examined the relationships between these constructs by means of a series of regression analyses. Perceived risks were negatively related to acceptability of nuclear energy, and perceived risks partly mediated the relationship between egoistic value orientations and acceptability. Perceived benefits were positively related to acceptability of nuclear energy and partly mediated the relationship between egoistic values and acceptability as well. Both perceived risks and benefits of nuclear energy did not mediate the relationships between the altruistic and biospheric value orientations and acceptability. Our results indicate that values are mainly indirectly related to acceptability, but are sometimes still directly related to acceptability as well, although weaker. The findings largely confirm that the relatively stable general value orientations affect perceptions of risks and benefits of nuclear energy and often indirectly influence acceptability via these specific beliefs.

Keywords: *nuclear energy, risks, egoistic values, Altruism, biospheric values*

Value-related information processing: An experimental study on waste prevention

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Excessive solid waste production is becoming both an environmental and economic burden in society. Even though people are increasingly engaged in recycle programs the waste mountain is continuously growing. Therefore, concurrently waste prevention has gained increased attention. On an individual level,

waste prevention is mainly about reducing consumption. People's motivation and ability to reduce personal consumption vary to a large extent. The aim of the present research is to explore how information can be designed in order to increase motivation. Internal motivation is operationalized as value orientation. It is hypothesized that information can be framed to match people's value orientations, thereby increasing message processing. We address this experimentally. Before reading the persuasive message the participants completed a value orientation questionnaire. Equal numbers of participants with sex and age balanced were then randomly assigned to a 2 (Source: Reliable vs. Unreliable) by 2 (Argument frame: Economic vs. Environmental) mixed factorial design. After completing a value orientation questionnaire, participants read messages on waste prevention where the source was framed as either reliable or unreliable. Dependent variables were favourability of cognitive responses and post-message attitudes. As predicted, factor analysis identified two distinct groups with either egoistic or altruistic value orientation. Participants with egoistic value orientation had more positive attitudes towards the economic arguments and processed them more thoroughly than did participants with altruistic value orientation. In current practice, provided information about waste management is most commonly homogenous even though the target groups are dissimilar in many ways. Since the present research suggests that information about waste prevention with economic framing is unlikely to reach individuals with altruistic value orientation, a suggestion is to adjust information.

Keywords: *information processing, waste prevention, value orientation*

Victim responses to interpersonal deviance: Motivators and deterrents to response strategy selection and evidence that even EVLN - R is not enough

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The two dimensional, (active/passive and positive/negative) exit, voice, loyalty and neglect

framework (EVLN - Withey and Cooper, 1989) was originally developed to study individual responses to dissatisfying workplace situations. Recently, the framework was theoretically expanded to include retaliation (R - active and negative) where the perpetrated individual becomes a perpetrator. Aims of this study were to determine if the EVLN-R framework is applicable to the interpersonal deviance domain in reference to victim response strategies; what factors motivate or deter response strategy selection, and whether victims also use other, non EVLN-R response strategies. The national sample spanning a range of industries consisted of 19 employees, 25 - 64 years, ($M = 39$), 16 females, recruited using snowball and convenience sampling methods. Semi-structured in-depth interviews commencing with a critical incident technique explored victims self-reported experiences of perpetration at work by other employees. Digital recordings were independently transcribed by a professional service blind to the aims of the study and a random selection of interviews were checked for transcription accuracy (99%+). The data were content analyzed in NVivo using a combination of both a priori thematic and data reduction techniques. The results also suggest that while victims use response strategies that resemble the expanded EVLN - R framework, they also use a number of other strategies, both behavioral (e.g. Ignoring, managing/befriending the perpetrator and avoidance) and cognitive (e.g. minimization and denial). The results suggest that response strategy selection is influenced by individual (e.g. need for confirmation, justice or social support and motivation to protect others) and situational factors (e.g. fear of negative consequences including victimization, a culture of silence, perceptions of HR as "for management" and absence of results/positive results). It is evident that, whilst useful, the EVLN-R framework does not adequately capture the wide range of responses that victims use, and specifically it excludes any cognitive response strategies. Practical implications of this research are relevant to organizations, HR practitioners and individuals, and the study makes a worthwhile contribution to the sparse literature on victims, including what responses are used and why.

Keywords: *retaliation, victim response strategies, dissatisfying workplace situations*

Violence at school: A challenge for educational psychologists. Beyond focus on individual towards socio-cultural perspective

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The current study analyses mental models of activity displayed by Psychologists who work at educational contexts through narrations about their practice facing problems of violence at school. The research studies what kind of problems they name “violence”, where they are located and if they can search the history and analyse the variety of perspectives. On the other hand the study also looks at how agents have acted, who decided what actions for what, if there has been a chance to investigate or to help, towards whom intervention was directed, which instruments were used and results obtained. Categories of socio-cultural framework (Leontiev-Engestrom theory of activity) are linked to contextualist perspective of “mental models” (Rodrigo). Questionnaires about Situation-Problems of Violence in Professional Intervention at Educational Contexts were administered to sixty psycho-educational professionals that work at different schools in two main cities of Argentine, in the frame of specific postgraduate courses. Data were analysed with Multidimensional Matrix for Psychologists Professionalisation. Strengths, tensions and critical knots were related to: psychologists’ career, historic role of schooling and human development in impoverished and turbulent social contexts. Work points were: the relationship between violence and challenges for inclusive education; the importance of “emotionally holding” environments for education through meaningful learning; social justice and equality worth for exchanging experiences and knowledge with multivocality; the problem of educating diversity of people with one method, one direction and rhythm and the same goals for everybody; how psychologists can collaborate with teachers in inclusive solutions for behavior-and-learning problems; the former role of Educational Psychologists linked with assessment of special

educational needs children by using IQ tests; and the “splitting” between cognition and emotion, learning and life, reducing interpersonal/ institutional problems into individual mind questions since the origins of modern Psychology. To analyse their “models of activity” into social networks is a useful tool to re-conceptualize agents’ experience “from”, “in” and “for” action (Schon). It allows psychologists to deconstruct implicit conceptions that support practice.

Keywords: *violence, schools*

Violence, trauma, and suicidality: Multifactorial analyses of abuse, sexual violation, and perturbation across gender and sexual orientation

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Violence directed toward the self and others continues to manifest as a profound human problem, despite concerted amelioration efforts. Effective redress is hampered by taboos and underreporting, particularly in relation to sexual and familial violence and mental illness. The major objectives of this study were to: devise an inclusive, nonthreatening methodology to facilitate disclosure and circumvent previous research shortcomings, to achieve representation from under-researched and marginalized cohorts; to derive comprehensive data to measure abuse impact and sequelae; and to determine whether past suicidality differentiates individuals on current wellbeing. Quantitative and qualitative data were derived from 2503 Australian males and females, aged 16-83 years, using a nationwide online survey. Extensive analyses were conducted to differentiate victims and non-victims of child and adult sexual abuse; and non-suicidal individuals from those reporting past suicidality. Comparative examination encompassed domains such as gender, sexual orientation (SO), urban/rural location, psychosocial wellbeing, trauma symptomology, cognitions, substance use, and risk-taking. Procedures included factor analysis, regression, and multivariate analyses to identify perpetrator modus operandi; offence typology and impact; victim reactions; and

suicidal ideation and behaviour predictors. Current psychopathology was strongly associated with sexual abuse and suicidality histories. Heightened perturbation and suicidality were associated with childhood abuse and adulthood revictimisation. Males exhibited greater nondisclosure and help-seeking reticence than females, yet both have similar post-abuse psychopathology. Victims experienced multiple reporting barriers and frequent suboptimal reactions upon disclosure. Few perpetrators were reported. Perturbation, substance use, suicidality, and risk-taking varied across SO groups, evidencing vulnerability gradients such that bisexuality conferred greatest vulnerability, followed by homosexuality and heterosexuality. Rural location, contagion effects, and SO-related uncertainty and distress heightened vulnerability. Suicidality history and other variables were identified as useful vulnerability markers. Sociopolitical, judicial, clinical, and social change implications are discussed emphasizing needs for deconstructing silence, fostering help-seeking, nonthreatening methodologies, primary prevention initiatives, and strengthened responses toward substance use, mental illness, and victims and perpetrators of violence. Importance of including SO as a basic demographic variable in human research and fostering broader social acceptance, inclusive practices, and strengths-based initiatives to address minority group stress are also discussed.

Keywords: *violence, trauma, Suicidal behaviour, abuse, sexual violation*

Visual fixations in the weapon focus effect

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The Weapon Focus Effect (WFE) states that crimes involving weapons cause attention to be focused on central details (weapon), leaving little attention to be spent elsewhere. This causes memory impairment for peripheral details, such as the perpetrator's external features or the surrounding environment. The purpose of this study is to determine whether

eyewitnesses actually fixate on peripheral details, but fail to remember what they saw, or whether they spend all their attentional resources fixating only on central details. A slide show depicting a man (Target) entering a store, approaching the counter, and interacting with the clerk (6 slides) is presented on a computer monitor. The 3rd slide shows the Target reaching into his pocket, followed by the 4th slide (critical slide) which shows the Target a) handing over a check (Control condition), or b) pointing a knife (WFE condition). Half of the participants in each condition will view the critical slide containing an unusual-peripheral detail (UPD) in the top-left corner (Probe condition), and half without the probe (No-probe condition). After viewing a slide show, participants will complete a memory test regarding the central detail (money or knife) as well as peripheral details (e.g., Target appearance, environment). A 2(WFE vs. Control) x 2(Probe vs. No-probe) ANOVA will be used for data analysis. As the study is currently in progress, we predict that the WFE conditions will spend more time fixating on the central detail, compared to the Control conditions, leading to increased memory for the central detail and decreased memory for peripheral details. In contrast, the Control conditions will spend less time fixating on the central detail, resulting in better memory for peripheral details compared to the WFE conditions, and will also show better memory for the Probe. Until now, researchers have only been able to show through research that the WFE causes memory impairment for peripheral details. The present study may be able to demonstrate whether this because witnesses fixate only on central details, or actually see peripheral details but simply don't remember. This information could help investigators interview eyewitnesses of crimes involving weapons more effectively.

Keywords: *weapon focus effect (WFE), visual fixation, eyewitness accounts, memory, peripheral details*

Vocational development and expectations of transition to college or/and to work of high school seniors

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The purpose of the present study was to analyze the influence of a set of variables: sociological-contextual (age, gender, parental socio-economic status-SES), academic (typology of training in high school, school retentions), social-cognitive (career decision self-efficacy, vocational identity) and affective (dispositional optimism) in satisfaction, and outcome expectations of transitional pathways after high school: 1. to college; 2. to work; 3. to college (study) and work. The sample includes 622 high school seniors (12th graders), 376 females and 246 males, with ages ranging from 16 to 23 years old, attending both regular and vocational training schools, in the Madeira Autonomous Region, Portugal. The study design is non-experimental, with one moment of evaluation. To the study of predictor variables of transition pathways we used logistic regression. Results of the empirical study have shown that different variables are related with the anticipation of different pathways after high school; satisfaction and success outcome expectations. High scores in social-cognitive factors (career decision self-efficacy and vocational identity) are negatively related to school-to-work anticipation, satisfaction and positively associated to success outcome expectations to university transitions. Parental SES and vocational/technological training in high school are the major predictors to school-to-work transitions. Age and dispositional optimism are the major predictors to anticipate to study and work after high school. Implications of the results for career counseling interventions, and career services delivery are addressed. Finally, will be put forward suggestions for future research in the area of transitions, specifically dealing with school to work or/and school to college.

Keywords: *vocational development, transition, vocational identity, satisfaction, self-efficacy*

Waste and recycling behaviours – do positive attitudes towards the environment and education have an impact on people's behaviour? Do they raise awareness and cause best practice?

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This study aims to show how positive attitudes towards the environment and targeted education programs have had a positive impact on people's behaviour with regards to the disposal and recycling of waste. Tenants from two Sydney CBD buildings, whose buildings had implemented effective recycling programs, were targeted. Their facility manager notified the tenants about the survey via the company server. They were invited to complete the 145-question spreadsheet on the web and were given four days to complete it. It is not known how many people saw this message, however, 195 people completed the questionnaire. For the main building this represented about 10% of the tenants. The questionnaire was structured so as to explore a number of key constructs. A cross-sectional survey analysis was completed on the number of variables. The variables included items that tried to tease out the impact of domestic and commercial recycling education programs. Other items attempted to identify the people's recycling and disposal behaviour and their attitudes towards these. Some items attempted to see whether their company's green strategies sat comfortably with them. The frequency of responses on items in the recycling education section that referred to waste and recycling education that was provided by the people's local council showed that the majority thought the education was self explanatory and well written. These two items had a significant correlation with the item were the people said they created more recycling than waste on a weekly basis. There was also significant association in the following: if the people received education on the building recycling program, they did not create more waste than recycling on a weekly basis, and if they received information from the local council for the residential recycling program they tended to not create more waste than recycling on a weekly basis. The study has shown that there was significant support for the notion that Waste and Recycling education programs tend to raise awareness and cause best practice. The significant correlations between the questions specific to the education programs and certain key variables show a high level of understanding of key constructs that would be a part of any waste and recycling education program.

Keywords: *Waste recycling strategies, positive attitudes, education, green strategies, awareness*

What a difference a group makes: A comparison of individual and multilevel explanations of occupational stress

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Occupational stress research has been slow to incorporate multilevel analyses. Consequently, the exact role and influence of workgroup climate in occupational stress processes remains unclear. In this study, the job demands-control (JDC) model was employed as a theoretical basis for investigating the moderating effects of workgroup perceptions of cohesion and management on employees' well-being, turnover intentions and job performance. A survey containing measures of job demands, job control, emotional dissonance, workgroup cohesion, work-related affect, psychological strain, turnover intentions and job performance was distributed to police officers from one Australian police service. Survey responses were obtained from 2,200 operational police officers nested within 248 workgroups. Comparison to organizational reports indicated the sample was representative of gender and rank distribution. Both individual-level and multilevel structural models of the data were analyzed in Mplus. Prior to aggregation of data at the workgroup-level, a three step procedure was used to check the appropriateness of data for multilevel analyses. ICC values $> .05$ were obtained for perceptions of cohesion and management, but also for job demands, work-related affect and psychological strain, indicating significant workgroup-level variance in these measures. Multilevel exploratory and confirmatory factor analyses indicated some differences between individual and workgroup levels in the factor structure of the measures. Both structural models of the hypothesized relationships demonstrated acceptable fit to the data. Perceptions of management moderated between job control, emotional dissonance and work-related affect. The use of multilevel factor analyses as a preliminary step to aggregation of individual data to the group level was strongly supported. Workgroup climate, and in particular,

perceptions of management ('management climate') was found to moderate between job characteristics and strain. Results suggest that organizational efforts to ameliorate or exacerbate the harmful/protective effects of the psychosocial work environment on employees need to more fully consider the influence of workgroup processes and perceptions on these efforts. In the case of police officers, it seems that workgroup perceptions of management in particular can either buffer or exacerbate stressor-strain associations. Implications for future research and practice in occupational health psychology are discussed.

Keywords: *occupational stress, job demands-control (JDC) model, workgroup climate, management*

What about me? Perceptions of power, explanations for being targeted and self-reported outcomes for victims of interpersonal deviance

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Despite a recent emphasis on legislated psychological safety, rising concern regarding mental health issues (e.g. depression, stress and anxiety) and potential links to organizational behavior phenomena, studies on 'who, why and what does it lead to' are sparse. The aim of this study was to begin bridging this gap by exploring the role of power, victim explanations for being targeted and the self-reported outcomes of interpersonal deviance. The national sample spanning a range of industries consisted of 19 employees, 25 - 64 years, ($M = 39$), 16 females, recruited using snowball and convenience sampling methods. Semi-structured in-depth interviews commencing with a critical incident technique explored victims self reported experiences of perpetration at work by other employees. Digital recordings were independently transcribed by a professional service blind to the aims of the study and a random selection of interviews were checked for transcription accuracy (99%+). The data were content analyzed in NVivo using a combination of both a priori thematic and data reduction techniques. The results suggest that both absolute and perceived perpetrator relative

power influence why an individual is targeted. Victims described perpetrators as 'control freaks', suffering 'little person syndrome', with a perceived tendency to target individuals who present any sort of threat to them. Outcomes were influenced by victim response strategies and the type/duration of interpersonal deviance experienced, and included slight to severe physical and psychological wellbeing issues, decreases in job satisfaction and commitment, and notably the withdrawal of citizenship behavior. Learning, both over the process and from prior experiences, was also reported. Interestingly, similar prior experiences at school and other workplaces were reported by a proportion of cases, suggesting that some victims may somehow incite perpetration. It is evident that experiencing interpersonal deviance leads to negative outcomes for individuals and their organizations, with power playing a critical role in target selection. Implications of this research apply to organizations, HR practitioners, individuals and society overall. The study makes a worthwhile contribution to victim literature and provides support for further research on how interpersonal deviance can be prevented and managed more effectively.

Keywords: *psychological safety, power, interpersonal factors*

What can an organisation's history tell us about strategic leadership?

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This paper aims to draw attention to the value of organizational histories in the process of understanding aspects of leadership in times of change. There is an extensive literature relating to: the development of strategy; the assessment of individuals in order to predict their likely leadership potential; the internal (e.g. personal power) and external (e.g. international competition) forces underlying organisational change. Knowledge associated with these three concepts of 'strategy', 'leadership' and 'forces for change' needs to be synthesised by psychologists/consultants advising their clients (e.g., in the selection and development of Chief Executive Officers). This paper will attempt to show that an organisation's history can provide

further insights, and clarifications, when formulating the requirements for effective strategic leadership. The historical or longitudinal case study described in this paper covers the period 1966 to 2009 of a UK university. Data collection methods used involved the examination of documents and the interviewing of senior staff. A version of the critical incident approach was used in the semi-structured interviews: respondents were invited to identify key individuals, working parties, events and institutions that had an influence on the development of the university. The case study illustrates four components of strategic leadership: (1) Managing strategic choices (i.e. developing Organisation-Environment fit strategies); (2) Managing internal stakeholders (i.e. implementing chosen strategies); (3) Managing external stakeholders (i.e. protecting and enhancing organisational interests); (4) Managing CEO transitions (i.e. enhancing O/E fit through the appointment of a new CEO). Historical research of this nature can help academics and consultants understand why current strategies, structures and decision making processes have evolved into their present form. It also helps us to understand the role of the CEO, and his or her team, in manipulating the forces for change in pursuance of strategic objectives. The paper should be of interest to practitioners involved in the process of selecting and developing CEOs/Vice-Chancellors, and to academics involved in conducting more quantitative research into this complex area of strategic leadership.

Keywords: *leadership, organisational change, strategy, forces*

What can the N170 tell us about face processing in schizotypy?

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Deficits in facial affect discrimination in schizophrenia may reflect inadequate configural processing. It has been proposed that the event-related potential (ERP) known as the N170 reflects the process of encoding facial information to form a structural representation.

We investigated whether configural processing was behaviourally and/or neurophysiologically different in persons with high schizotypy. Healthy individuals ($N = 28$) were assigned to either high or low schizotypy extremes defined by the Oxford Liverpool Inventory of Feelings and Experiences (O:LIFE; Mason, Claridge & Jackson, 1995). Two stimulus types were presented in both an upright and inverted orientation; Mooney stimuli (configural information only), and photographic stimuli (both featural and configural). These were compared with non-face stimuli and participants were required to make face/non-face judgements. N170 latency and amplitude were submitted to separate repeated measures analysis of variance with the following within subject factors; orientation (two levels, upright and inverted), hemisphere (two levels, left and right), and electrode (three levels, P7/P8, PO7/PO8, CB1/CB2). Group sizes were too small to detect differences. Correlations of the O-LIFE scores with amplitudes for each electrode were then run. Accuracy and reaction times did not differentiate the schizotypy groups, however O-LIFE scores correlated significantly with N170 amplitudes ($p < .05$). Assessment of group waveforms revealed that high schizotypy showed a trend for reduced N170 amplitudes to both face orientations, relative to the low group. Reduced amplitudes in high schizotypy indicate impoverished facial information during face processing. Face processing impairment in schizophrenia may instead be attributable to a global reduction in the quality and/or quantity of fine detailed information. Determining the aetiology of face processing deficits will have a significant impact on the management of social distress experienced in schizophrenia, and subsequent treatments may help to reduce delusions of a social/persecutory nature.

Keywords: *schizophrenia, facial affect discrimination, event-related potential, schizotypy, face processing*

What makes or breaks creative performance: How the achievement motive affects the evaluation of ideas

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One crucial step regarding the implementation of a creative suggestion is the line manager's decision whether to support the idea or not. This study seeks to contribute to our understanding of the factors that enhance the likelihood of a decision-maker sponsoring an idea by exploring the effect of the decision-makers' achievement motive and characteristics of the idea and idea presenter. We conducted two experiments with student participants. Participants' trait achievement motive (AM) was assessed. Then, participants were presented written scenarios that depicted a situation in which a fellow student had come forward with an innovative idea. Participants' reaction to the idea was then obtained. Experiment 1 (2x2 design, $N = 83$) manipulated whether or not the innovative idea permitted satisfaction of the achievement motive. An interaction effect with participants' AM was assumed: Individuals high on AM should rate the idea serving the motive more favourably than the other idea, while the reverse should apply for participants low on AM. In Experiment 2 (2x2x2 design, $N = 174$), we additionally manipulated the AM of the person voicing the idea (high vs. low). Participants were expected to evaluate an idea more positive when they perceived the AM of the suggesting person corresponding to their own. Thus, we proposed a three-way-interaction. Dependent variables were idea appraisal, intentions (e.g., probability of supporting the idea), affective reactions, and the imputed intentions of the idea presenter. Hypotheses were partially supported. Interactions were as predicted: Participants low on AM rated the idea that did not fit their motive less positive than the idea that did fit. Hypotheses regarding imputed intentions were not confirmed. Besides replicating previous results, corresponding effects occurred for affective reactions and behavioural intentions. The interaction of the suggesting person's and participant's motive had an impact on participants' negative affective reactions, general appraisal and probability of approval; other effects were less strong. Results suggest that whether an employees' idea will be sponsored by their line manager will not solely depend on the utility of the idea (as implicitly assumed) but might be also influenced by the idea's implications for the motives of the beholder.

Keywords: *creative performance, achievement motivation*

What the Hell is Employee Presenteeism?!

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Presenteeism occurs when employees are physically present but mentally absent. We investigated the extent to which supervisor behavior is associated with employees' presenteeism. We also investigated the efficacy of a measure of job-stress-related presenteeism. Australian employees ($N=154$) from organizations completed a questionnaire asking how often they experience job-stress-related presenteeism and about their supervisor's behavior. Results from hierarchical multiple regression analyses were supportive of our hypothesis that supervisor behavior will be associated with employees' presenteeism. Negative supervisor behaviors were more strongly correlated with presenteeism than positive supervisor behaviors. Our results suggest presenteeism is another factor subject to supervisor influence, and they provide additional evidence for the important effects supervisors can have on employees. In addition, our results indicate that the measure of job-stress-related presenteeism pilot-tested in this study has good internal-consistency reliability and merits further tests of its utility and validity.

Keywords: *presenteeism, supervisor, job-related stress*

What theoretical basis for intervention with very young children?

LÉCUYER, R. (Université Paris Descartes)

The prevailing theory concerning the first months of cognitive development is the nativism, that is, the infant would be born equipped with knowledge independently of any interaction with the environment. It follows from this view that no environmental influence can change the basic conceptions of the world. Another conception can be based on the construction of early representations. This

second approach would leave the possibility for both cognitive disturbances and actions for compensation. Adopting this latter view presupposes that we are able to describe the genesis of these representations. The purpose of this presentation is to describe the acquisition of knowledge from the end of fetal life until the age of three months, where a number of knowledge has been evidenced, and to propose a representational system that can account for this development of knowledge through interactions with the environment.

Keywords: *cognitive development, nativism, cognitive disturbances, representations*

What works? The impact of educational and development project in elderly care

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In an intervention project, "Steps for skill", which took place between 2005-2008, the aim was to build an infrastructure for learning in a public elderly care organization with 1800 employees. The project contained education and development activities for individuals, work groups, and leaders. In addition two, occupationally mixed, teams were formed and these teams worked with work group development and transfer of specialist competence to the work groups. Before, during, and after the intervention period data has been collected. The design is basically a case study but contains also comparison groups that have not been subject to intervention. In all, the questionnaires (including learning climate, group climate, psychosocial work environment, health, stress, motivation, attitudes to workplace learning) have been completed by 320 participants. There is a substantial amount of interview material, observation data, and documents collected within the same period of time. The preliminary results showed that on an individual level there were no differences between the intervention and the comparison groups before and after the intervention. But there were differences between workplaces and different types of work organizations. Those who had been subject to other organizational changes during the project period seemed not able to benefit from the intervention. Those who

worked in home help services had the lowest learning climate scores before the intervention improved during the project period. The leaders gained in the social factors but not in their experience of competence. It is argued that the sustainable effects of the intervention are mainly related to the teams and organizational learning processes. In conclusion, to target organizational processes and consider the effects of organizational changes are of vital importance when planning and implementing a learning and development project.

Keywords: *elderly care, organisational changes, organisational learning, education*

What's in a meme? Internal letter transposition, word length and the eye-voice span

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To investigate if internal letter transposition (ILT) decreased reading performance and memory output in a rehearsal-free memory task using the eye-voice span (EVS) as the measure. The major source was an internet meme (a rumour, urban legend or concept propagated via email) suggesting that ILT did not affect reading performance, provided the initial and final letters in words remained unchanged. An Interrupted Reading Task (IRT) tested the concept of the original meme. Reading speed, number of words output and output duration were measured by analysing sound files recorded from the IRT. The IRT presented text passages on a computer screen to participants, who immediately began reading them aloud, until a predetermined point at which the experimenter caused the text to disappear from view, replacing it with a random pattern mask, while participants continued reading aloud for as long as they could. Text passages were designed so that the words following the interruption were either mostly long (3 or more syllables) or short (one syllable). Additionally, passages were either presented as unmodified text or as ILT stimuli, where the internal letters were randomised whilst leaving the initial and final letters intact. Word length was manipulated

within subjects, and ILT condition between subjects in a mixed ANOVA. Recorded output represents the contents of the EVS, which relates to short term memory capacity. Significant main effects obtained for both the ILT manipulation (ILT worse) and word length (long words worse) on the measures of number of words output and output duration, as well as a significant interaction showing the ILT further reduced output measures when passages contained longer words. A significant difference in reading speed was evident, with ILT passages read much slower than unmodified text. Data and analyses support both the DRC model of reading (Coltheart et al., 2001) and a global account of word recognition (Frankish & Barnes, 2008) as well as reiterating the robust and well-known Word Length Effect (WLE; as noted in Baddeley et al., 1975) – however the IRT is a rehearsal-free task and as such the results do not support rehearsal accounts of the WLE. The content of the original meme is, unsurprisingly, refuted by these data.

Keywords: *internal letter transposition (ILT), reading performance, eye-voice span (EVS), internet meme*

What's it like to be back home?

ALLAN, A. (University of Melbourne)

This study aimed to discern the nature of psychosocial adjustment experienced by medical humanitarian aid workers after returning from deployment overseas on their first humanitarian emergency mission. 28 humanitarian aid medical doctors and nurses completed a Q-Sort on three occasions in the period 0-10 months following their return from an international emergency deployment. The Q-Sort elements comprised 38 biopsychosocial descriptors pertaining to cognitive and emotional functioning; social and vocational activity and personal, health and self-care behaviour. Participants sorted elements according to perceived salience at time of sort (-3 to +3). A total of 79 sorts were factor analyzed. A Varimax rotation of factors revealed 53 out of 79 sorts accounted for by 9 factors. The 9-factor solution catered for 69% of the variance (Eigenvalues >1 and loadings ≥ 0.42). The results of the Q-Sort revealed qualitatively

different patterns of psychological adjustment phenomenon than typically outlined in studies describing the adjustment of corporate or student expatriate re-entry experiences. Rather than describing compartmentalized and sequential re-entry experiences as discrete phases of elation, depression, recovery and adaptation, this Q-Sort analysis suggests that the nature of adjustment is better understood by consideration of the underlying existential constructs of meaning, purpose, order, role and sense of belonging. For many humanitarian workers, their profound experiences in the realm of human suffering results in a permanent shift in their existential frame of reference. Re-entry support for humanitarian aid workers could be strengthened by an increase in qualitative understanding of the existential challenges faced upon reentry and the subsequent impact this has on the quest for adjustment. The results of this study have implications for the nature of support and timing of support that is offered to humanitarian aid workers upon their return home from deployments.

Keywords: *psychosocial adjustment, medical humanitarian aid workers, deployments*

When hurt endures: The influence of degree of closeness, degree of attachment and victim attachment style on ongoing hurt feelings

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Hurt feelings are an important negative emotion and there are a number of complex factors that influence their development and expression. Much of the field is yet to be explored empirically. One area where research is at a preliminary stage is in understanding why hurtful events continue to cause pain long after the event has ceased to have an impact on the individual's life. Recent studies have indicated that both the degree of closeness and the degree of attachment that the victim has to the perpetrator of the hurtful act, as well as the victim's attachment style, influences the intensity of hurt feelings resulting from the event. The current study aimed to assess

whether these factors in conjunction influence the processing of hurt over time. The current study used a self-report questionnaire with 97 adult participants (90 females, 7 males, *Mean* = 27.56, *SD* = 6.43) from a community sample. This is a preliminary sample of the expected 200 participants. Participants recalled hurtful events from three relationships of varying closeness, and reported the intensity of hurt from each event both at the time the event occurred and at the time they completed the study. The study also measured the degree of attachment to each relational partner, as well as the attachment style of the participant. The closeness of the perpetrator to the victim significantly predicted the hurt experienced from an event, with closer relational partners causing more hurt both at the time of the hurtful event and at the time of study. The closest relational partners also met the criteria for full-blown attachment relationships. Regardless of relationship, there was a significant reduction in the level of hurt over time. Attachment anxiety and avoidance significantly interacted with the change in hurt over time, but only for hurt originating from romantic partners. This suggests that attachment style plays a role in how hurtful events are processed, but these effects only become salient in the context of an attachment relationship. These findings are explored within an evolutionary framework.

Keywords: *emotions, hurt, attachment style*

When is it ethical to breach confidentiality with adolescent clients engaged in risk behaviours? A survey of Australian psychologists

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Confidentiality is a vital piece of the therapeutic puzzle in psychology. It allows clients to speak honestly about sensitive aspects of their lives and it allows psychologists to build an effective therapeutic alliance with their clients. However, psychologists describe confidentiality as the cause of their most serious ethical dilemmas. These dilemmas are further complicated when clients are adolescents, as young people differ

from adults in their emotional, social and cognitive capacities. The current study aimed to investigate: (1) when Australian psychologists believe it is appropriate to breach confidentiality with adolescents; (2) what types of considerations mediate their decisions about confidentiality with adolescents; and (3) what general philosophies they employ when making such decisions. A total of 264 Australian psychologists completed an online survey. The survey consisted of three parts. Firstly, a series of vignettes describing risk behaviours being undertaken by a 15-year-old male were presented and respondents were asked to indicate whether they would breach confidentiality in each scenario. Secondly, respondents were asked to rate the importance of 13 separate considerations for making decisions about breaching confidentiality with adolescent clients. Finally, respondents were asked to articulate their general philosophies about breaching confidentiality with adolescent clients and the types of factors that mediate their decisions. Factor analysis and thematic analysis were used to analyse the quantitative and qualitative data respectively. Australian psychologists demonstrated general consensus about the need to breach confidentiality with adolescents when a serious and immediate risk of harm was present. However, great variation existed in their opinions about less serious scenarios. When deliberating about decisions regarding confidentiality with adolescent clients, Australian psychologists consider three key areas: professional obligations; process issues; and the overall best interests of the young person. Australian psychologists also described significant challenges concerning confidentiality dilemmas with adolescent clients and articulated a desire for greater support, guidance and training in this area. The results of the current study were used to produce a model for ethical decision-making about confidentiality dilemmas with adolescent clients.

Keywords: confidentiality, ethics, adolescents, decision making, Australian psychologists

When is professional ethics education indispensable? Psychology students' answers to professional dilemmas

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The aim of this study was to discover to what extent is the personal ethics and ethics training given during undergraduate studies sufficient for psychology students to judge the soundness of psychological interviews. This information would be the basis for assessing improvements in students' judging abilities after training in professional ethics competencies. 50 psychology students evaluated either one interview related to school issues (a psychologist interviewing a teacher), or one related to psychotherapy (a first session). The interviews were performed by actors and filmed. Scripts included ethical mistakes and were judged by 8 and 9 experts, respectively. Four sample groups participated, with students from three public universities, two groups on courses related to school or educational psychology, and two related to psychotherapy. Ten students had never received formal ethics education, 18 had studied one ethics course and the rest had had some classes within different courses. Participants were asked to write down their judgements arguing their cases, proposing alternatives, and stating which principles were violated according to the Code of Ethics of Chilean Psychological Association and/or The Universal Declaration of Ethical Principles for Psychologists. Answers were analyzed using Content Analysis. All the students (50) identified correctly the violation of confidentiality. Evaluating the school psychologist's interview, 22 (95.6%) students focused on the interviewee's wellbeing. Ten (43.4%) incorporated the wellbeing of other members of the school, and/or the school itself, in their analysis. Fourteen (51.8%) clinical answers alluded to the violation of the patient's autonomy. No one considered the others' wellbeing involved in the patient's problem. Students succeeded in identifying ethical faults in the one to one helping relationships, focused on the consultant's inner world. This matched the traditional way of representing psychology work. A more sophisticated deontological background would be required when dealing in institutional contexts and having to consider the

perspectives and wellbeing of multiple participants.

Keywords: *personal ethics, ethics, psychology students, psychotherapy, judgement*

When latent inhibition influences change blindness? The moderating effect of epistemic motives on perceptual style

LIOU, S. (National Cheng Kung University)

This study examines how epistemic motives moderate the effect of Latent Inhibition (LI) on change blindness. Change blindness is the striking failure to see large changes that normally would be noticed easily. Although our understanding of visual perception and awareness are fairly well established in the change-detection literature, how individual differences in knowledge, personality, or expectations influence change detection as a function of the semantic content of a scene has still been underexplored. This study proposes that reduced LI decreases change blindness, and the effect is moderated by need for cognitive closure (NFC). LI, the ability to selectively attend and respond to relevant stimuli, and to ignore irrelevant ones, is essential for adaptive behavior. Many recent studies relate selective attention to individual differences. Thus, we hypothesize that reduced LI decrease change blindness. Moreover, Individuals scoring high on NFC are likely to lead to a very narrow information search and a higher tendency to use cognitive heuristics when it comes to finding a solution to a question. Hence, we hypothesize that higher NFC will enhance the tendency to adopt default perceptual heuristic, thus expand the difference of change blindness between high and low LI. Two experiments both in laboratory and field were conducted. We used the latent inhibition paradigm (LI; Lubow, 1989) to divide into high and low LI group, and manipulate NFC both by situation (time pressure) and by disposition measure (Webster & Kruglanski, 1994). Task materials developed by Simons & Chabris (1999) were used as to measure change blindness in laboratory experiment. We also developed an interactive media on internet as field experiment. Results both from laboratory and field experiments show that individuals with

reduced LI detect more change, i.e. decrease change blindness. Moreover, the difference of change blindness between high and low LI is expanded when with higher NFC thus support the hypothesis. These findings suggest that individual differences (aging, cultural differences, expertise, and practice) and their relationship to change detection and attention is an exciting new direction for the field. The implication for applying this motivated cognition in human computer interaction design is also discussed.

Keywords: *epistemic motives, latent inhibition, change blindness, need for cognitive closure*

Why do individuals with borderline personality disorder drop out of treatment?

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The aim of this study was to investigate whether individuals who drop out of Dialectical Behavior Therapy are different from those who complete therapy on demographic factors and pretreatment psychiatric functioning. Thirty individuals with Borderline Personality Disorder participated in a modified group-only version of Dialectical Behavior Therapy in a public mental health service in Victoria, Australia. Participants were predominantly female (93%), aged between 23 and 59, were predominantly single (83%), and were Australian born. Individuals were assessed before and after a year-long cycle of DBT with the following assessment tools: The Structured Clinical Interview for the DSM-IV I and II, the Suicidal Behaviors Questionnaire, the Beck Depression Inventory– Second Edition, the State-Trait Anxiety Inventory, the World Health Organization Quality of Life – Brief, the Ways of Coping Checklist, and the Affective Controls Scale. Of the 30 participants who were included in the study, 22 dropped out of treatment (6 dropped out before entering the skills group and 16 dropped out once the group had commenced) and 8 completed a cycle of Dialectical Behavior Therapy. Individuals who dropped out of treatment tended to be single, had a fear of abandonment, and had more Borderline Personality Disorder traits at

pretreatment than those who completed therapy. Individuals who drop out of treatment differ from those who complete therapy on a series of easy to identify pretreatment factors. These findings have implications for the treatment retention of a group of clients who are notorious for dropping out of therapy.

Keywords: *borderline personality disorder, treatment, Dropout rates*

Willingness to pay a fair price

GEERTSHUIS, S. (University of Auckland)

The aim of this research was to build understanding of how purchase decisions are influenced. The research examines the impact of benchmark prices, conceptions of fairness, satisfaction with service and self-reported decision criteria on willingness to pay. Over 400 existing customers responded to an online survey on willingness to pay for community education courses. Respondents were asked to provide data on the price they were willing to pay in response to a series of vignettes. They were asked to rate satisfaction level so that the strength of relationships between satisfaction and willingness to pay could be assessed. The survey also obtained data on attitudes to fair price setting and subsidy and on the factors respondents felt were important in making purchasing decisions. Self reported decision making data and benchmark prices predicted willingness to pay to a limited extent. Satisfaction with service also predicted willingness to pay with satisfaction with content and the accuracy of course descriptions and the pleasure derived from learning being the areas of satisfaction which translated most consistently into a willingness to pay higher prices. Bargain price points appear to be more sensitive to satisfaction than do points at which products start to become expensive. Respondents appeared to be basing judgments of fair pricing on cost of production and the ability of the individual to pay. The results are interpreted with an exchange theory model and contribute to understanding in that they offer an insight into the relative contributions of benchmarking and satisfaction to willingness to pay. In examining the relative contribution of

different aspects of satisfaction the paper provides useful insight into aspects of service and product development that may be more important than others in building revenue.

Keywords: *purchase decisions, fairness, satisfaction, willingness*

Women in academia: a cross-cultural perspective on identity and work/life balance

BENINGER, A. (London School of Economics and Political Science)

What challenges do women in academia in the United Kingdom, Australia, and the United States face in achieving work/life balance? How do cultural norms and institutional and governmental policies affect this balance? Sixty academic women, 20 each in the UK, Australia, and the US, in permanent contract positions both with and without primary care responsibilities were recruited via email to take part in this study. They came from a diverse range of fields including anthropology, psychology, business, and medicine. In-depth interviews composed of 12 open-ended questions were conducted with each participant to provide a detailed look into the challenges these women face on a daily basis balancing work and life outside work. Following the interview, each participant filled out a survey with quantitative information regarding their domestic division of labour, specifically hours spent at work, on childcare, and on household tasks. The dominant live-to-work ideology of the UK, mirrored by the US, leads individuals to prioritize work over other parts of life and limits the use of progressive European Union policies. Australian participants, by contrast, described an egalitarian culture that encourages individuals to have a life outside of work, in turn fostering more progressive institutional and governmental policies that support a more desirable work/life balance in a mutually reinforcing cycle. The more desirable work/life balance promoted by institutional and governmental policies in Australia was found to reduce stress and minimize guilt among academic women, specifically with respect to childcare, improving overall life satisfaction. The results of this

research have important policy implications and provide cross-cultural comparisons that illuminate potential solutions to shared social problems.

Keywords: *women, academia, work-life balance*

Work and recovery: Different behavioural strategies to recover from work complexity and work interruptions in nearby nature

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Work stress-related illnesses and health costs are increasing in modern societies. Nearby outdoor recreation areas are important for workday recreation, but little is known about the role nearby recreation behaviour plays for people in the recovery from workloads. This study aims to answer the question of whether nearby recreation behaviour is influenced by the work situation and whether different types of cognitive workload are associated with different nearby recreation behaviours. A total of 656 inhabitants (53% women) with an average age of 48 years from the Swiss peri-urban city of Frauenfeld (22'000 inhabitants) returned a postal questionnaire on work complexity and interruptions at work, and on their workday nearby recreation behaviour. They were specifically asked to indicate the frequency with which they realize diverse cognitive, emotional, physical and social use goals on workdays. Workloads were measured with Semmer, Zapf, and Dunckel's (1999) stress-oriented job analysis instrument (ISTA) while use goals were measured with items adopted from different leisure scales and a qualitative pilot study. Multivariate regression analysis showed that variations in cognitive workloads correspond to different nearby outdoor recreation behaviours. Thus, people recover in nearby nature with specific behavioural strategies depending on the characteristics of their particular loads at work. Organizational health management and landscape management would be well advised to take the differentiations into account when designing restorative environments.

Keywords: *recovery, behavioural strategies, recreation, work complexity*

Work motivation of employees in production innovation: An exploratory study in the Chinese furniture industry

YU, N. (Albert-Ludwigs-University), LEWARK, S. (Albert-Ludwigs-University)

Innovation is one key element of industry development. In the past decade, the concepts of lean production and mass customization were introduced to developing countries. Substantial efforts of R&D have been made. Significant success was achieved by implementing new working systems or improving the existing ones, mainly as the result of using automatic machines, advanced information technology or production process reengineering. But unfortunately, neglecting work motivation of employees resulted in limited success of implementation of new working systems in enterprises. Therefore, an exploratory study was conducted to reveal the relationship between the nature of work and the motivation potential of employees in the process of technology innovation in the Chinese furniture industry. The study was carried out in three Chinese furniture enterprises, which were all in phases of production innovation, being large, medium and small sized enterprises, respectively. The questionnaire used in the research was modified, based on the Job Diagnostic Survey (JDS) in Chinese. The resultant questionnaire survey was validated with 190 incumbents holding 45 distinct jobs and demonstrated high reliability and convergent and discriminant validity. Based on the data analysis, the results showed that growth satisfaction ($r=.54$, $p<.01$) and feedback from agents ($r=.53$, $p<.01$) were significantly related to the motivating potential score (MPS, $M=113.5$, $SD=57.5$), which is a score reflecting the potential of a job for eliciting positive internal work motivation on the part of employees. Based on the study, we conclude that if managers and supervisors could devote more effort to considering the desire of personal growth of employees and setting up good communication and feedback mechanisms that would be helpful to motivate their employees and to gain greater success in production innovation in the Chinese furniture industry.

Keywords: *motivation, innovation, China*

Work stressors, performance, and the moderating influence of engagement of knowledge employees

LI, Y. (Remin University of China)

As a test of the 2-dimensional model of work stressors, the present study proposed differential relationships between intrinsic stressors and extrinsic stressors and performance, which were expected to be moderated by employee engagement. A sample of 625 knowledge employees was tested by Work Stressor Scale (WSS), Role-based Performance Questionnaire and Employee Engagement Scale. There was significant age-and-gender interaction in work stressors. And the author obtained a positive relationship between intrinsic stressors and role-based performance and a negative relationship between extrinsic stressors and role-based performance. In addition, employee engagement moderated the relationship between intrinsic stressors and role-based performance but did not moderate the relationship between extrinsic stressors and role-based performance. This suggests that organizations would pay more attention to intrinsic stressors of knowledge employees as long as they increase employee engagement and control the stressors from job characteristics. Further implications for organizational theory and practice are discussed.

Keywords: *work stress, performance, Work Stressor Scale*

Work-family enrichment, collectivism, and cultural workplace outcomes: A study of New Zealand Maori

HAAR, J. (University of Waikato), BROUGHAM, D. (University of Waikato)

Work-family enrichment has emerged as a positive way to test the work-family interface and its influence on outcomes. However, there has been little study of enrichment on indigenous populations, and furthermore, there has been little attention paid to outcomes

associated with cultural elements. The present study tests work-family enrichment (WFE) and family-work enrichment (FWE) towards Maori cultural outcomes as a way to explore the importance of Maori culture in the New Zealand workplace. In addition, collectivism was tested as a potential moderator of these relationships due to Maori having strong collectivistic notions. Data were collected from 172 Maori employees, with data collected in two time periods, separating predictors (time 1) from outcomes (time 2), with a four week gap. Two distinct factors were found regarding cultural values in the workplace: work cultural enjoyment and work cultural satisfaction. Regression analysis was conducted with WFE and FWE predicting outcomes with collectivism included as a potential moderator. WFE was significantly linked to cultural work enjoyment while FWE was significantly linked to cultural work satisfaction. Enrichment accounted for sizeable amounts of variance towards cultural work enjoyment (15%) and cultural work satisfaction (29%). In addition, collectivism was tested as a potential moderator and was found to significantly interact with FWE towards cultural work enjoyment and with both WFE and FWE towards cultural work satisfaction. The interaction effects accounted for minor additional variance of 3% to cultural work enjoyment and 2% towards cultural work satisfaction. Regarding cultural work enjoyment, interactions showed that high collectivism was most advantageous at low levels of FWE only, leading to higher levels of cultural work enjoyment. Regarding cultural work satisfaction, high collectivism leads to greater satisfaction at all levels of WFE, and similarly, towards satisfaction at all levels of FWE. These significant interaction effects highlight the importance of collectivism for indigenous employees and the way it can interact with enriching aspects of the work-family interface and how indigenous workers may view culture in the workplace. Overall, there is strong support for enrichment influencing cultural workplace outcomes, especially FWE which aligns well with Maori and their focus on whanau or extended family.

Keywords: *work-family enrichment, collectivism, cultural workplace outcomes, New Zealand Maori*

Work-life balance: A longitudinal analyses of the mediating effects of conflict and enrichment processes across Australian and Chinese samples

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The aim of the current study was to address some theoretical and methodological gaps in work-life balance (WLB) literature by evaluating the longitudinal nexus between WLB and its antecedents and outcomes within the framework of Conservation of Resources (COR) theory and Job Demand-Resources (JD-R) model across Australian and Chinese samples. The study used two-wave longitudinal data collected from two different cultural settings, Australia, ($n = 846$) and China ($n = 854$). The estimation of relevant parameters, test for the hypothesized coefficients, and assessment of stability and cross-lagged paths were based on longitudinal structural equation modeling. In the mediating process, time-based WFCT was the most influential mediator revealing that the mediating effect was stronger in the Australian sample than in the Chinese sample. The direct effect of supervisor support on WLB was significant in Chinese sample and the direct effect of work demands on WLB was significant in the Australian sample. The impact on psychological strain was significantly higher in the Australian sample, than in the Chinese sample, confirming cultural effects in the tested models. The variance explained in WLB by explanatory variables was higher in the Australian sample than in the Chinese sample. First, it was found that an overall work-life balance construct that is independent of conflict and enrichment components can make a useful contribution to advance theory and improve practice. Second, the cross-lagged modeling of the effects of demands (work and home) and resources (work and home) on work-life balance through two underlying psychological processes ('health impairment pathway' and 'motivation pathway') confirm the key tenants of JD-R model and COR theory. Third, the cross-lagged modeling uncovered the mediating role of conflict and

enrichment processes in the relationship between demands and resources and work-life balance, the conflict processes were clearly more dominant than enrichment processes in the tested models. Finally, there is evidence to support cultural differences in the dynamics of WLB in Australian and Chinese samples.

Keywords: *work-life balance, conservation of resources theory, job demand, multi-cultural*

Workspace, employees' territoriality and affective consequences: A critical review

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In this presentation, we discuss research connecting office space, emotions, attitudes and acts through the lens of employee territoriality, its effect on team affective processes and the consequences that follow. Literature suggests that office size and features drive employees' territoriality of marking and defending. Moreover, the consequences of workplace territoriality are paradoxical. Office size influences employees' health status, while open space offices reduce costs, improve communication and foster relationships. Likewise, control of territory leads to identity, security and stimulation, which increase productivity. In contrast, territoriality holds potential to increase conflict, aggression, frustration, turnover, noise, and loss of privacy leading to inefficiency. Studies also show that workspace features connect affectivity. For example, physical aesthetic features affect employees' mood and behaviours. Similarly, open-plan office leads to poor satisfaction and motivation while the interaction between noise and light collocates with the recall of negative emotional words. Nevertheless, the development of instruments designed to study territoriality at work is in its infancy. In our presentation, we discuss two critical questions: How can we reduce the negative and promote the positive affective consequences of employees' territoriality? How can we study the connection between workspace, territoriality and team affective outcomes? Further research should explore three phenomena related to

territoriality and affectivity. First, *time is* crucial; the same territorial behaviours initially provoking conflict may later reduce conflict because of more defined boundaries. Second, team composition should moderate overtime the impact of territorial affective products (conflict, emotions) on team outcomes. Thirdly, training could ameliorate the negative effects of workplace territoriality. We recommend that researchers use a multi-method design to study workplace territoriality and team affective interactions qualitatively (e.g., experience sampling method) and quantitatively (physiological data) over time. Results hold potential to further our understanding of the role of time, team composition and training in the association between workspace behaviours and affectivity to improve managers' territorial management skills. Our review expands the literature on territoriality and team affectivity with a potential to improve personal and managerial skills in this area.

Keywords: office space, emotions, attitudes, employee territoriality, team affective processes

Abstracts of the 27th International Congress of Applied Psychology

Brief Oral Presentations

"How did this happen? What can we do?" Comparing family members' beliefs about adolescents' medically unexplained somatic symptoms

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This study involved 50 adolescents (aged 12 to 17 years) with medically unexplained somatic symptoms and their families. They received a multi-disciplinary, rehabilitative treatment program which attempts to help them gradually draw a link between somatic and psychological aspects of the adolescent's condition. The aim of this study was to compare family members' health beliefs over the course of treatment. Thirty six percent of the adolescents met criteria for Chronic Fatigue Syndrome, and the remaining 64% received a DSM-IV diagnosis of one of the Somatoform Disorders. Participants and their parents completed questionnaires measuring physical and psychosocial functioning (the Child Health Questionnaire) and health beliefs (the Illness Perception Questionnaire) at recruitment, four months into treatment, and 12 months later. Analyses of variance (ANOVAs) were conducted to examine how adolescent functioning and family health beliefs changed over the 12-month period, and to compare family members' health beliefs over time. There were significant improvements in adolescent physical and psychosocial functioning over the first four months of treatment, and these were maintained at 12 months. In terms of beliefs about what caused the adolescent's condition, significant interaction effects were obtained such that parents became increasingly open to the role of psychosocial causes, while adolescents did not. In terms of beliefs about what might cure/control the condition, significant main effects for time and family member were obtained, as well as a significant interaction effect. Follow-up contrasts revealed that fathers placed greater importance on the adolescent's role in cure/control (relative to the role of treatment) than other family members, and that this difference became more marked over time. This study provides support for a

family-based approach to adolescents with medically unexplained somatic symptoms. It illustrates that parental health beliefs may be more amenable to change than those of the adolescent.

Keywords: *adolescent unexplained somatic symptoms, illness perceptions, child health, chronic fatigue syndrome, family-based approach*

'Dokic is not an Australian name': Constructions of identity, culture and nation in Australian perspectives on multiculturalism

DANDY, J. (Edith Cowen University)

The Australian multicultural 'experiment' has often been described as highly successful, resulting in the "peaceful co-existence" of diverse groups (Borowski, 2000, p. 461). Whilst there is some evidence to support this, there remains considerable racial and ethnic discrimination in Australia as well as continued ambivalence in Australians' attitudes toward multiculturalism and acceptance of 'outgroups'. In this paper I will discuss these attitudes, their features and their possible foundations. In so doing, I will draw upon interview and survey data collected over the past five years, including the Australian Pilot for the International Study of Attitudes Toward Immigration and Settlement (ISATIS; Dandy & Pe-Pua, 2009). I will argue that there are competing discourses in Australian multiculturalism that echo concerns in other diverse contexts and nations. Australians' support for multiculturalism is connected with beliefs in social equality and egalitarianism but these are in tension with fears of threats to Australian national identity and social cohesion. These fears can be linked to essentialist discourses of race and ethnicity, as well as beliefs that cultural homogeneity is necessary for strong communities (Dunn, Forrest, Burnley, & McDonald, 2004). I will propose that these discourses serve to reinforce white multiculturalism in Australia, in which Australian identity remains centred around a white, British cultural heritage (Dandy, in press; Forrest & Dunn, 2006; Hage, 1998). The paper will conclude by opening for discussion of ways that researchers and policymakers can contribute to the development of a more inclusive

construction of national identity in Australia and other diverse contexts.

Keywords: *diverse cultural backgrounds, multiculturalism, immigration, Australia*

'Making sense' of climate change response: Reframing the applied challenge of climate change mitigation and adaptation.

O'NEILL, G. (Griffith University)

Climate change (CC) constitutes the most significant challenge facing humanity and the natural environment this century. Substantial debate continues in the media as to whether CC is real, and if it is, whether the prime causes are anthropogenic, natural cyclical patterns of the earth's climate, or some combination of these. These social representations of CC have resulted in a confusion of beliefs and concerns. A substantial proportion of the public is reported as believing that the risks of CC and its likely impact on their life are low, to be skeptical about any immediate direct threat to themselves, and as not feeling personally vulnerable or responsible for CC. For others, apocalyptic predictions and media doom-saying are arguably resulting in feelings of despair and hopelessness. Research into public understandings of CC can be usefully informed by conceptual frameworks such as 'sense making' (SM) and the 'social amplification and attenuation of risk' (SAAR). Such models can assist in identifying key factors influencing risk perception and appraisal, and in designing effective messages and strategies to foster appropriate behaviour change. Inter alia, empirical research based on SM and SAAR could provide valuable insights into how individuals deal with and respond to CC. For example, SM is a framework and an approach in psychology and the social sciences which addresses how individuals and societies make sense of their world and their experiences from the myriad of cues in their external (social, physical, etcetera) and internal (cognitive, affective, etcetera) environments. Sense making is also the underlying process that individuals use to make sense of a threat and phenomenon such as climate change. Social amplification of risk is a

phenomenon in which risk events or perceived threats become heightened through collective information processing and sense making. Public perceptions of risk are influenced by such sources as news media, scientists, private networks, public agencies, other institutions and personal experience. Risk is also amplified by intra-individual information processing and sense making biases. Factors that appear to contribute to risk attenuation include protection motivation, level of trust and credibility in information sources, and the extent of disagreement or debate. This paper assesses the extent to which selected theories, models and conceptual frameworks provide a useful basis for exploring important psychological aspects of how individuals and societies perceive, appraise and make sense of climate change.

Keywords: *climate change, sense making, social amplification, collective information-processing, climate change*

'NIMBYism' and public participation in electricity network change

DEVINE-WRIGHT, P. (University of Exeter)

The United Kingdom Government plans to implement greater low-carbon electricity generation from both nuclear and renewable energy sources in response to the problem of climate change. These changes lead to a need to extend and reinforce the existing electricity network to connect new generating sources and balance electricity demand and supply. New overhead line proposals, often in rural areas, are problematic due to public reactions to proposed routes, reactions often dubbed 'NIMBYism'. Public opposition has emerged around issues such as potential health risks from electric and magnetic fields, damage to visual amenity and household property values. As such, the rationales and methods of engagement between network operators such as National Grid and local communities affected by line proposals are of critical importance for understanding how individuals' respond to technology proposals. This paper draws together the results of two ongoing qualitative studies: interviews with key actors in the networks industry around issues of public roles and engagement methods ($n = 25$) and an investigation of representations of public

participation in network planning using the Q-method with a diverse sample of local actors in affected line proposal communities ($n = 28$). The findings show how recent regulatory change has encouraged greater levels of engagement by network operators with members of the public. However, this typically occurs at a level 'downstream' of the decision-making process. We conclude that industry engagement practices lack a clear rationale and means to incorporate citizen perspectives 'upstream' in network planning. If these factors could be resolved, then this may mitigate public opposition and foster mutual trust between network organisations and citizen groups.

Keywords: *renewable energy, industry engagement, decision making, citizen groups, public opposition*

"All my hurts my garden spade can heal": The meaning of domestic gardens in the lives of community-dwelling older adults

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Human attraction to gardens and green-spaces goes beyond mere aesthetics. According to Biophilia theory, we are not only genetically programmed to respond positively to natural environments, our emotional, intellectual, and physical well-being depends upon having access to nature. The extant literature supports the therapeutic value of gardens, plants and horticultural activities for a variety of populations; however few studies have systematically explored the importance of the domestic garden in the lives of community-dwelling older adults. A gardening survey, developed for this study, included an activity inventory; several open and closed questions about involvement in, and feelings about, gardens; Attitudes to Ageing Questionnaire (AAQ); demographic information; and subjective health and quality of life. The survey was distributed to a large sample (approximately 300-plus) of community-dwelling older adults across Australia. Participants reported numerous benefits associated with their gardens and gardening activities, which could be summed up as tangible, physiological or psychological rewards. For some participants, active pursuit of

their gardening activities, despite experiencing physical limitations since first gardening, was extremely important, while for others, simply 'being' in the garden was of value. Participants reported reminiscence of childhood gardens, and the desire to pass on the benefits of experiences to younger people; this latter effect increased with age. Other benefits included a sense of purpose from cultivating plants; having an outlet for physical activity and exercise; and social benefits, which were significantly increased for those members of a gardening club. Participants overwhelmingly agreed that if they had to leave their gardens, it would be important to continue gardening elsewhere. Encouraging continued participation in gardening activities may be one way to support older adults' ageing in place. Home gardens and related activities afforded older adults the opportunity for increased well-being, meaningful engagement and manageable physical activity. The results also have implications for the establishment of community gardening programs as a means of providing a common shared interest with other older adults and with future generations, through mentoring younger participants; and for the establishment of gardening activities in residential care facilities as gardens provide a link to the past and a connection to the outside world, according to this sample.

Keywords: *garden aesthetics, well-being, community dwelling older adults, Attitudes to Ageing Questionnaire*

"Dynamic sequences of behaviour" (DSB): Development of an inventory for the analysis of processes which can lead to burnout and inner emigration

JIMENEZ, P. (University of Graz), SEILINGER, B. (University of Graz), HASIBEDER, J. (University of Graz)

Dynamic processes and behaviours which can increase the risk for burnout and inner emigration are mentioned in the literature. The processes themselves are studied very seldomly in individual and organizational analyses. The newly developed questionnaire is based on a system analytic approach and allows detecting self-reinforcing dynamic circles of behaviour in

critical person-situation interactions. The questionnaire was tested together with additional instruments (CSESd, RESTQ-Work, EDEM, HOM-scale of HAKEMP-90, MBI-GS-D) with 900 employees of a non-profit-organization. The consistency of the scales and subscales is presented; the scales prove to have good values. Validity was tested with structural equation modeling. The items of the Dynamic Sequences of Behaviour inventory (DSB) refer to concrete behaviour of persons in situations at work. These situational sequences are based on models of burnout and also inner emigration and allow detection of critical self-reinforcing cause-effect circles. The important aspect of the questionnaire is to use it for prevention purposes in an organizational diagnosis. The use of the questionnaire helps to derive interventions for individuals for changing their behaviour and also for the work environment in the organizations in a differentiated way.

Keywords: *burnout, person-situation interactions, work environment, behaviour change*

“Narativizing” a vocal tic: The use of narrative therapy in the ridding of “Mr Squeaky in a single session”

FERNANDEZ, M. (Northcentral University)

Using the well known philosophical approach of externalising the problem (Fernandez, 2001; White & Epston, 1990) in Narrative Therapy, the technique of “interviewing the problem” was used in extinguishing an ubiquitous vocal tic, “Mr Squeaky”, that had afflicted a 9-year old girl for over two weeks. The vocal tic was not only interfering with her social network at school and at home but also with her sleep. “Interviewing the problem” involved a series of externalising questions that separated the problem from the person and created space to “see the problem” for what it was. In mapping out the influence of the tic, several questions were asked that focused on the reasons for the tic; how it happened to choose this child; what its plans were for her; whether it saw itself leaving the child; whether there was a possibility of it having a “holiday” so it could allow the child to sleep etc. All questions were addressed to the child, with the therapist facing the “problem” while

asking the questions. This is an approach that is not often used for behaviours of this nature. Carr, Taylor, Wallander, & Reiss (1996), among others, have noted that a functional treatment of habit forming behaviours has been the usual mode of treatment for tics. Over 90% of the tic had disappeared from her person by the second session (a gap of a week between the first and second sessions), with the remaining expressions of it extinguished by the beginning of the third session (a gap of a week between the second and third sessions). At the third session the tic was brought into the session in an airtight container labelled “Squeaky lives here.” In this age of brief therapies, Narrative Therapy represents a novel way of extinguishing dysfunctional behaviours or habits. The use of a story metaphor is very attractive to children, and allows children to experiment with behavioural control in a way that empowers them.

Keywords: *externalising the problem, narrative therapy, interviewing the problem, habit development, tics*

“Their system, our crisis!” A French study of the social representations, personal involvement and behavioral responses to the financial crisis of 2008

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This empirical study focused on laypeople’s thinking about the financial crisis of 2008 in France, and shows how established practices and personal involvement affected the social representations of the crisis, and the subsequent behaviors. The originality of this study consists in completing an analysis of laypeople’s thinking about the financial crisis at the positional level of explanation, a complement to the ideological level often used in sociology, and to the intra- and inter-individual levels often adopted in psychology. Previous studies showed that established practices are a determinant factor in shaping social representations, and suggested personal involvement as a major explanatory variable. Personal involvement (Flament and Rouquette, 2003) corresponds to an individual’s relationship to a social object, such as the financial crisis, and is a combination of three

dimensions: valuation of, exposure to, and perceived capacity to act on the crisis. The study was run in France in the first month of the financial crisis (October 2008). It was conducted within the structural approach to the Theory of Social Representations (TSR), which enables formal comparisons among representations with the aid of its specific methodologies (cf. *infra*). To compare the social representations of the financial crisis among participants ($N = 30$) who had different levels of practice we questioned senior executives of the financial sector, and lay participants. Participants' personal involvement was measured as a selection variable on six-point Likert scales. The structure of the social representations of the financial crisis was analysed through a standard procedure developed within the structural approach of the TSR: prototypicality analysis (Vergès, 1992). Results showed that, relatively to the executives, lay participants reported significantly lower personal involvement (lower valuation of, exposure to, and also perceived capacity to act on the crisis). However, all participants perceived collective action as more effective than individual action. This finding may be an explanation of the high expectations of French for institutionalised (as opposed to individual) action (though other explanations, such as the French culture's relatively high uncertainty avoidance (cf. Hofstede), should be considered, too). In both groups, the social representation of the financial crisis displayed salient normative aspects and, especially for lay participants, low functional orientation. This structure explains the social representations' low efficiency in prescribing behaviors (inertia). Indeed, little change in consumer behavior was reported by lay participants. In contrast, all executives in the sample reported immediate behavioral change of least one consuming behavior (individual action), and having additional intentions of behavioral change if the crisis continues. The TSR predicts that the behavioral change reported by executives is temporary and conditional ("if" the crisis continues), unless the change brought by the crisis in the general context is perceived as irreversible (Rouquette and Rateau, 1998). A study in progress should tell if this is the case, or if the crisis contributed to a sustainable behavioral change, that is, a change in consuming habits, especially knowing that the

end of the crisis (reversibility of context) is predicted for 2010 to 2011.

Keywords: *financial crisis, social representations, behaviour change*

2D:4D Digit ratio and close following

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The 2D:4D digit ratio, the ratio of finger length between the index and ring finger, has been linked to exposure to testosterone at a specific point in the development of the fetus. Higher levels of testosterone at this point in development result in lower 2D:4D ratios, and in turn digit ratios have been correlated with a range of behavioural outcomes, such as sexual orientation, sensation seeking, stock trading and risk taking. This experiment set out to use a driving simulator to examine the relationship between 2D:4D digit ratio, close following, sensation seeking and risk perception. Digit ratios were measured using a scanner and the GIMP software for windows. Participants were then required to follow a car at 50 kilometers per hour over several different distances, ranging from 7.9 meters to 56.1 meters, as well as being able to select their own following distance. Ratings of risk, task difficulty, effort and comfort were collected after each drive and analysed. Participants also filled in the Sensation Seeking Scale. The lateral displacement and following distance of participants (in the free following condition) were also recorded. The results are in the final stages of being collected, and will be analysed and fully available at the time of the conference. The findings of this study will be discussed in terms of their relevance to driver safety, and the usefulness of the 2D:4D ratio to indicate a propensity for producing risky driving behaviours.

Keywords: *digit (finger) ratios, driving simulation, sensation seeking, risky driving behaviours, risk perception*

A classroom intervention to facilitate students' asking questions

NGUYEN, H. H. (California State University, Long Beach), LEWIS, M. (California State University)

What can be done to increase the frequency of question asking and broaden the types of questions that individuals may ask in the classroom? The researchers hypothesized (a) that students would ask more questions if they could ask the questions anonymously and receive feedback from educators, (b) that the quality of questions would change from lower cognitive types of questions to higher cognitive ones during the intervention, and (c) that students' learning approaches would change from surface-learning to deep-learning. This study used a mixed design of natural observation and pretest-posttest, two-group intervention. The first author sat in two sections of the same course (introduction to industrial-organizational psychology) taught by the second author, and observed students' target behavior (asking questions verbally) in their natural setting (classroom) for 12 class periods per section ($N = 51$). Both frequency of question asking, question content, and types of questions asked were recorded. On the 7th class observation, the researchers recruited voluntary participants to respond to two pretest and posttest surveys for extra credits. The experimental group (participants in one course section; $n = 23$) additionally received the intervention: (a) they were asked to anonymously submit in writing any questions that they had not verbally asked in class, and (b) they received the researchers' answers to their questions at the beginning of a following class period. The surveys consisted of a measure of student's learning process (deep versus surface learning) and demographic questionnaire. The qualitative data (students' verbal and written questions asked) were coded according to Bloom's (1956) taxonomy of educational objectives, and the quantitative data were analyzed to detect group mean differences. As predicted, students in the experimental group asked significantly more questions (both verbally in class and in writing) than the control group because of the intervention. Further, some students in the experimental group reported a significant shift from baseline surface-learning approach to deep

learning approach at the end of the study. However, the types of questions asked did not change: students were still more likely to ask procedural questions than questions about materials presented. This study has several practical implications for both teachers and employers: an environment of anonymously submitted questions may encourage students' or employees' question-asking behavior because individuals do not want to feel embarrassed or look incompetent by asking questions in the open. Also, individuals tend to ask more procedural questions than explanation questions, which may be beneficial for organizations that require their employees to know how to do something, even if they do not know why they should do it. Last, teachers or employers should not expect that students/new hires know how to apply or evaluate classroom information into the real-world setting, or that they would be willing to admit their ignorance by asking clarifying questions. Therefore, students or staff should be given proper training or orientation to perform their tasks correctly.

Keywords: *classroom questions, students, surface versus deep learning, learning approaches*

A comparison investigation of episodic memory in schizophrenic patients, their biological relatives and normal people

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This study aimed to investigate episodic memory in schizophrenic patients, their biological relatives and comparison with normal people. Twenty schizophrenic patients, 20 their biological relatives and 20 normal people were randomly selected and William's Individual Episodic Memory Test (WIEMT) was administered on them. In the research, the participants were presented 15 target words (five pleasant, five unpleasant, five neutral words). The participants were asked to recall a past memory associated with target words. An ANOVA test was used to analyze the data. Findings showed significant differences among groups. The majority of schizophrenics were oriented to choose neutral and somewhat unpleasant stimuli (words) and recall their past

memory with a depressive and unpleasant matter and their relatives too. However the majority of normal people chose the better and pleasant words with good and pleasant past memories. Our results reveal that deficits in episodic memory can be regarded one of the most prominent cognitive deficits in schizophrenia and should thus be taken seriously in both its diagnosis and treatment. It stresses the importance of assessing memory function impairments in clinical settings. Also, choosing the neutral (and not pleasant) stimuli (words) may cause a tendency to depressed mood and can impair social cognition in schizophrenia that may be an important predictor of social dysfunction.

Keywords: *schizophrenia, memory function, assessment of schizophrenia, episodic memory, social dysfunction*

A comparison of international and local students on fear of external threats and fearfulness: A cognitive behavioural perspective

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Two inter-related studies compared international with local students on their specific fears of external threats (e.g., crime and public places) and on fearfulness. Mass media reports of crimes against international students have emphasised external threats, while Culture Shock Theory proposes that international students are more likely to report feeling fearful than their local counterparts due to internal processes of adjustment. A cognitive behavioural theoretically based model of fear of crime underpinned this investigation. Quantitative studies utilised nonclinical and clinical participants respectively. Study 1 surveyed 591 international and 579 local students across four universities regarding victimisation, perceptions of social disorder, perceived risk and fears of specific crimes, and avoidance behaviors. Study 2 compared 640 international and 2252 local students presenting at a university counselling center on a range of clinical variables, including fearfulness and feeling afraid of public places. Data analysis utilised Structural Equation Modelling. Study 1 found that compared with

local counterparts, international students express higher levels of fear of crime. Testing of the cognitive behavioural model showed a nonrecursive relationship between cognitions, emotions, and behaviours associated with fear of crime. All three factors are significantly related to participants' perceptions of social disorder and their levels of social integration. However, experiences of victimisation have a nonsignificant impact on avoidance behavior. For clinical participants in Study 2, comparisons of cohorts on fearfulness and feeling afraid of public places are nonsignificant. Depression and somatisation are significantly related to both fears for both groups. However, depression is more strongly related to fearfulness whereas somatisation is the strongest predictor of feeling afraid of public places. Separate comparisons of international and local students on other clinical variables showed different patterns of relationships to the two types of fear. Implications arising from Study 1 suggest the importance of addressing issues relating to social integration and engagement of international students in influencing perceived risk, fears of crime and avoidance behaviors. Study 2 highlights the role of the depression and other clinical issues in fears for both international and local students.

Keywords: *international students, victimization, culture shock theory, fearfulness, threat*

A cross-cultural study of computer games and internet addictions in middle schools

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This study explores and analyzes middle school students' computer games and Internet addictions and the relationships of these two addictions with factors regarding students' backgrounds, interests, activities, associations and academic studies in nine countries: Australia, Canada, England, Hungary, Israel, Japan, Korea, Russia, and the United States. International database was used: TIMSS 1995, 1999, 2003, and 2007. The sample was from the eighth grade and a Student Questionnaire was used. Tables, figures, descriptive methods and

correlation were used. Middle school students' computer game addictions increased from 1995 to 2003 but these rates decreased in 2007 in some countries; for the current four years, Internet addiction rates have quickly increased in all participating countries except Korea. Male students play computer games significantly more than females do, but gender differences in using the Internet are very different among the countries; home study conditions are also positively related to Internet addictions but are negatively related to computer game addictions in some countries; the numbers of books in a student's homes has similar results as the home study condition with two addictions; and in a general, parents' education levels have negative relationships with the addictions. The results also reveal that students being bullied in schools, hurt by others or made to do things they do not want was also related with their addictions. These two addictions also influence students' learning habits for outside-of-school reading and doing homework greatly, but results have large differences among the countries. Finally, the relationships between the addictions of computer games or Internet and students' academic achievement, interests, feelings regarding school and expectations for education are identical: all relationships are negative and almost all of them are significant. In conclusion, computer games and Internet addictions are have developed quickly in middle and high schools in all countries, and there are many resulting negative influences on students' study, life, attitudes and activities. It is necessary to find effective testing, find preventing methods and the first step is to analyze current situations and related factors, and summarize and develop practical experiences for all students in the world.

Keywords: internet addiction, computer game addiction, student addiction, video games and students

A cross-cultural study of instrumental motivation towards school science learning: Findings from PISA

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This study explores and analyzes 15-year-old students' instrumental motivation towards school science learning and its gender difference, the relationships between instrumental motivation and students' social, economic and cultural status, and their school science academic achievements in nine countries (regions): United States, Japan, United Kingdom, Germany, France, Hong Kong-China, Macao-China, Chinese Taipei, and China. An international database was used and Student Questionnaire of PISA 2006 was answered by the 15-year-old students. The five indices of instrumental motivation towards school science learning were "help later work", "learn need later", "useful to me", "improve my career", and "get a job". Descriptive methods, figures and tables, ANOVA, t-test, Pearson correlation and multiple linear regression were used. On average, 15-year-olds from all the nine countries (regions) were more likely to value school science as an instrument that could "help later work" and "useful to them" and Chinese students' instrumental motivation towards school science learning was the strongest. The situation of gender differences of instrumental motivation is very different among all the countries (regions). Parents' education level influenced the five aspects of students' instrumental motivation in very different ways among all the nine countries (regions), but in general, it was positively related to the instrumental motivation. Educational resources such as education software and cultural possessions such as art works at home both had significant positive effects on students' instrumental motivation in most countries (regions). However, family wealth such as cars was a less effective influencing factor on students' instrumental motivation. We also found the index that school science is "useful to me" was a good predictor of students' science achievement in school. In general, instrumental motivation was very important for 15-year-olds in their school science learning. Since students who believe science is useful to them would be more likely to make an effort on learning science and gain a higher achievement on it we believe that improving students' instrumental motivation could guarantee students put their time and attention into learning science, transforming it into a genuine interest.

Keywords: *student's interest in science, instrumental motivation, science learning, students*

A cross-culture study on aesthetic preference for traditional Chinese and western paintings

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Western and Chinese artists have different traditions in representing the world in their paintings. While western artists since the Renaissance period represent the world with a geometric perspective and focus on salient objects in a scene, Chinese artists since before the mid-nineteenth century continue to apply a reversed geometric perspective and concentrate more on context information in traditional Chinese paintings. The present study aimed to find out whether these different ways of representation influence the aesthetic preference for traditional Chinese and western paintings in different cultural groups. Forty-six Peking University students, of whom half were Chinese and half were westerners, participated in the study. Eighty traditional Chinese paintings and 80 western paintings were presented randomly on a computer screen for an aesthetic evaluation. Both Chinese and western paintings included two categories: landscapes and people in a scene, with 40 paintings in each category. All paintings were selected for their culturally different ways of representation according to a theoretical analysis. Students were asked to evaluate the beautifulness of each painting by pressing a corresponding number key from one to eight. Number one represented the ugliest painting and number eight - the most beautiful painting. Results showed a significant interaction between source of painting and cultural group. For typically represented Chinese and western paintings, a pattern of aesthetic preference was observed. Chinese students gave higher aesthetic scores to traditional Chinese paintings than western paintings, and foreign students from western countries tended to give lower aesthetic scores to traditional Chinese paintings than western paintings. These results suggest that the way artists represent the world in their paintings influences how culturally embedded viewers perceive and appreciate paintings. The

clear cultural difference in aesthetic preference for traditional Chinese and western paintings might be correlated to culturally different perceptual habits and social practices in every life of the different cultures.

Keywords: *cross-cultural, aesthetic preference, Chinese painting, western painting*

A cross-level perspective on employee voice: Goal orientation and team psychological safety

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Relevant academic research showed that employees with specific personality traits are more willing to speak up than others and the relationship between individual goal orientation, team climate and employee voice with people of Chinese cultural background still remained unclear. Based on self-motivation and person-situation interactions theories, this study developed a cross-level model of individual goal orientation, team psychological safety and employee voice, and tried to gain a better understanding about individual behavior and context. The sample constituted 27 sale-teams comprising 201 employees recruited from a large chemical company in China. Based on hierarchical linear modeling, we explored three models to test individual-level effects, team-level effects, and cross-level interaction effects on employee voice respectively. We also computed the proportion of variance in employee voice explained by individual-level factors as well as by team-level factors. The results showed that, individual-level, employee developing orientation and approach orientation are positively related to employee voice, while avoidance orientation is negatively related. In team-level, the team psychological safety has not only directly impacted on employee voice but also has positively moderating effects between individual approach orientation and employee voice — the team's psychological safety strengthened the positive relationship between approach orientation and employee voice. However, cross-level interaction effects of team psychological safety with developing orientation and avoidance orientation were not significant. From an achievement motivation and

person-situation interactions perspective, this study adds further evidence to explain employee voice behavior. Our research extends the existing theory of employee voice through understanding how the team context may interact with individual motivation to affect individual voice with a cross-level framework. The cross-level interaction hypotheses based on the theory of situational strength were supported, and the situation and individual motivation seemed to play an important role in shaping individual voice behavior, so the substantial implications of this study are as follows: first, the study highlights that not only the individual but also the individual in his/her context should be considered. Secondly, the findings of this study show that fostering a safe climate in a team would be an effective way to encourage employees speaking up.

Keywords: employees, team psychological safety, individual goal orientation, achievement motivation, person-situation interactions

A grounded theory study on civil servants' psychological contract

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Civil servants' mental state can affect not only an individual's job satisfaction and job stress, but also can influence the government performance and government's image. However, few on-going research studies focusing on it in have been done in China's academic world. The Civil servants' mental state is comprehended from the perspective of Psychological Contract in this study. The study intends to explore the content of the Civil servants' Psychological Contract on the one hand, and to explore if Psychological Contract Violation happens in government. A qualitative method is used in this study. The data were collected by open-ended individual interviews with 33 Civil servants who work for the government and were analyzed by using grounded theory. The study establishes two models to understand Civil servants' Psychological Contract, which include the model of Civil servants' Psychological Contract content and the model of Civil servants' perceptions of Psychological Contract fulfillment. The Contract

Content Model shows that the Civil servants conceive that the obligations they should take for the government are from five aspects: work responsibility, peer responsibility, underlying responsibility, public responsibility, and self-aware responsibility. The Contract Content Model also shows that the Civil servants conceive that the obligations the government should take for them are from twelve aspects: basic insurance, supporting working environment, working payments, rewards upon performance review, vocational development, advice adoption, outstanding leader, healthy networking, value appreciation, social status, job stability, and fairness. The Contract Fulfillment Model shows that Contract Violation does happen in government. When the violation happens, Civil servants will adjust the Psychological Contract content and take several behaviors such as to being slack in work for a reply, which can affect an individual's job satisfaction, job stress and the government performance and government's image. From the perspective of Psychological Contract the researcher found Civil servants have a strong will to take public responsibility, see themselves as representatives of government and have strong obedience. When performing the Psychological Contract, the government department leader, Civil servants' regime, culture background, and servants' individual status all become important factors that influence the direction of the whole process.

Keywords: civil servants, job satisfaction, job stress, government performance, government image

A job-demands resources model for promoting worker wellbeing: A randomised controlled trial

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The aim of this study was to determine the effectiveness of a theoretically-driven online worker wellbeing program for employees in the Australian alcohol and other drug (AOD) sector. A randomised controlled trial involving Australian drug and alcohol sector employees ($N = 243$) was conducted. Participants were allocated to an intervention group ($n = 118$)

involving five online cognitive behavioural sessions or a wait-list control group ($n = 125$). Intervention content was tailored to address key identified AOD work environment demands (client, workload and work-life demands). Work engagement (UWES-9), burnout (MBI and CBI), psychological distress (GHQ-12), coping (Brief COPE), job satisfaction (MOAQ), and turnover intention (MOAQ) were assessed pre- and post-intervention and at 12-weeks follow-up. Preliminary analysis indicated that the online worker wellbeing program had some beneficial effects. Differences between the intervention group relative to the control neared significance on the CBI work burnout subscale at post-intervention (intervention: $M = 40.52$, $SD = 16.41$; control: $M = 46.34$, $SD = 16.30$, $p = .053$), and reached significance at 12-weeks follow-up (intervention: $M = 37.46$, $SD = 13.82$; control: $M = 47.15$; $SD = 16.25$, $p = .001$). However no changes attributable to the intervention were observed at post-intervention or follow-up on the MBI burnout scales, work engagement, or psychological distress. There were no significant group differences over time in job satisfaction or turnover intention. Attrition, despite being significantly higher in the intervention group (post-intervention: 42.4%; 12-week follow-up: 57.6%) compared to the control group (post-intervention: 22.4%; 12-week follow-up: 28.0%), was comparable or lower than rates reported for similar online interventions. This study has important theoretical and practical contributions. A Job-Demands Resources model of burnout and work engagement is provided for the AOD workforce. Additionally, some psychological benefits of a tailored cognitive behavioural intervention were demonstrated. Online psychological interventions are a viable cost-effective strategy to promote the wellbeing of employees in high demand/low resource work environments.

Keywords: worker wellbeing, alcohol and other drug sector, work engagement, burnout, job-demands resources model

A longitudinal investigation of perceived peer influence, body dissatisfaction, and eating problems in early adolescent females

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The aim of this research was to examine the role of perceived peer influence on the development of body image and eating problems in young adolescent girls over time. Specifically, this research will investigate (1) whether perceived peer influence is longitudinally associated with the development of eating problems (restrictive dieting or bulimic behaviours), and (2) whether this relationship is mediated by body dissatisfaction. Participants were 1094 female students from ten girls' high schools in New South Wales who completed a battery of questionnaires at three time points, each one-year apart (Grades Seven, Eight and Nine). The battery included measures of perceived peer influence, body dissatisfaction, bulimic behaviours, dietary restraint, body mass index, and demographic information. Missing data were imputed using multiple imputation methods. A longitudinal mediational model was then developed in order to examine the relationship between the variables of interest across the three time points. The collected measures served as indicators for the following latent variables: perceived peer influence, body dissatisfaction, dieting and bulimic behaviours. Preliminary analyses showed that the observed variables related to the latent variables as anticipated (that is, the measurement model was a good fit to the data). A comprehensive structural equation modeling approach based on statistical recommendations from the literature will be used to examine pathways between the key variables. Final results will be presented at the conference. Given that early adolescence is a high risk period for the development of body image and eating problems, and that peers become an increasingly important source of influence during this time, studying these factors in concert may provide further insight into how the development of body image and eating problems may be interrupted. If perceived peer influence contributes significantly to the development of body dissatisfaction, and, in turn, eating problems, then it is important that the peer environment is addressed in prevention and intervention programs.

Keywords: *body image, eating disorders, adolescent peer influence, body mass index, body dissatisfaction*

A longitudinal mediation model of the mechanisms of change within a mindfulness-based stress reduction program

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This study aimed to develop a model of the mechanisms by which the cultivation of mindfulness skills leads to improvements in quality of life. Recent studies have shown another outcome of the mindfulness-based stress reduction (MBSR) program is increased self-compassion (Shapiro et al., 2005), therefore another aim of this study was to examine the relationship between self-compassion and the development of mindfulness. One hundred and sixty-five adult participants in an 8-week MBSR program responded to questionnaires at four time points: before, during and after the course, and 3 months following course completion. Measures used were: Five Facet Mindfulness Questionnaire (Baer et al., 2006), Toronto Mindfulness Scale (Davis et al., 2009), Self-Compassion Scale (Neff, 2003), DASS-21 (Lovibond & Lovibond, 1995), SF-12 Health Survey (Ware et al., 1995), and Credibility Expectancy Questionnaire (Devilly & Borkovec, 2000). Preliminary data analysis revealed significant increases across time for Observe, Act with Awareness, Nonjudge, Nonreact, Decenter and Self-compassion. In addition, there were significant improvements in symptoms of anxiety, depression and stress, and increases in physical and mental wellbeing. Curiosity and Describe factors did not change significantly. A model of the mechanisms of mindfulness will be developed in using a longitudinal mediational model showing pathways between increases in aspects of mindfulness and self-compassion, and improvements in wellbeing. A number of researchers have highlighted a need for future mindfulness research to determine the mechanisms of change (Brown et al., 2007; Shapiro et al., 2006). This empirical model

provides preliminary evidence of these mechanisms of change. Instructions given during MBSR classes emphasise cultivating curiosity toward the nature of one's experiences, therefore it is surprising that the Curiosity factor did not change across time. MBSR instruction does not emphasise labeling experiences, therefore the lack of significant change for the Describe factor is to be expected. Final results and conclusions will be presented at the conference.

Keywords: *mindfulness-based stress reduction, mechanisms of change, quality of life, self-compassion*

A means-ends chain analysis of a successful implementation of an information system

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With organisations investing heavily in new information systems (IS) and a significant number of these implementations not succeeding, it is fundamental to investigate factors that contribute to the successful implementation of an IS. It is known that employees' behaviours are pertinent to the success of an implementation; however there is a limited understanding of employees' behaviours and how they contribute to the success of an implementation. It is for this reason that this case study utilising the personal construct psychology technique of laddering within a means-end chain analysis framework investigates the relationship between employees' perceptions of a successful implementation, the related consequences, and values. Three employees of a large Australian manufacturing organisation: two females and one male with a mean age of 46 years participated in this case study. Laddering is an in-depth interview that facilitates an understanding of the relationship between certain attributes and the individuals associations to higher level values. The participants were asked "what for you constitutes a successful and unsuccessful implementation?" Then laddering begins by selecting a set of attributes (one for successful and one for unsuccessful) for the individual and

then they are asked which pole they prefer. Laddering continues by asking “why is that attribute important to you?” This process continues with the participants responses until it is apparent that the participant is having trouble responding indicating that the top of the ladder has been reached. The laddering responses were analysed in accordance with Reynolds and Gutman’s (1988) means-end chain analysis theory and a hierarchical value map displaying the relationship between the attributes, consequences, and values of the aggregate coded responses was constructed. The results indicated that the personal values of altruism and living to the fullest were associated with employees’ perceptions of a successful implementation. The results also indicated important attributes and consequences pertaining to the employees that are related to the success of an implementation. These results suggest a need to further expand the critical success factors prominent in the literature to include more factors pertaining to “people”, not just systems and processes.

Keywords: information systems, employee perceptions, means-ends chain analysis, laddering

A model for perceived social belongingness in the context of executive business and elite sport: A qualitative study

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Social belongingness has been referred to as a fundamental human need, and anthropology research has considered belonging to a small group as a human survival mechanism. The aim of this study was to explore constituents of social belongingness and propose a model of perceived social belonging in the context of executive business and elite sport. Individual semi-structured interviews were conducted upon 30 business executives and athletes; both elite and amateur. The interviews were transcribed and common themes were extracted. Participants did not perceive social belongingness in terms of individual relationships but instead as small groups, for example, “parents”, “friends”, “club members”, “team” or “neighbors”, clustered into three

domains: family, work/occupation and social life. All participants emphasized the self-regulatory aspect of social belongingness: “contributing” to be “supported”. Furthermore, participants reported feeling “energized” or “drained” depending on how they perceived their level of social belonging. Belongingness to one group could supply energy for operating in others. Senior executives and elite athletes were focused on generating sufficient energy for the work/occupation domain and reported significant situational fluctuations in perceived belongingness levels based on their perception of situational performance in high pressure environments. In contrast, employees and amateur participants were more concerned with “work-life-balance”. Proposed is a model of perceived social belongingness as a hierarchy of inter-connected small group related energy reserves providing resources for self-regulation, motivation and effort regarding that specific group, other groups within the same domain or other domains, and being re-energized by perceived social belongingness to that specific group. This proposed model furthers our understanding of perceived social belongingness, may be useful for the understanding of dysfunctional and self-defeating behavior, and additionally suggests a theoretical platform for applied interventions attempting to enhance motivation and performance in areas such as business and sport.

Keywords: social belongingness in elite sports, executive business, group relationships, situational performance, self-regulation

A new framework for understanding contested policy innovations designed to produce behaviour change

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The major determinants of behaviour change lie in the system and environment within which the person is embedded. Reshaping the environment to facilitate desirable behaviour patterns is an important area of cultural adaptation. Understanding the way people can act to collectively change their environment is critical to facilitating this process. This paper presents a framework for understanding and

supporting such changes. This was an analytical study applying concepts from Open Systems Theory (OST) and Actor-Network Theory (ANT). ANT organises the contest for change around four processes: mobilising evidence, building alliances, public positioning and institutionalising the changes. Supporting interviews concerning successes and failures in achieving smoke-free regulations, and any lessons learned for future tobacco control issues, were carried out with tobacco control experts from Ireland, United States of America, Germany, Australia, Canada, and the United Kingdom. OST was used to construct a model of a Tobacco Use Management System with four sub-systems (the tobacco industry, forces acting to reduce use, regulators, and tobacco users), acting in a broader environment that the System has to adapt with. This highlighted several endemic problems with the System that it cannot resolve from within. However, ANT proved useful in describing how such problems had been confronted in the past, and how to address future changes to more rapidly reduce tobacco-related harms. In conclusion, our models of population level behaviour change need rethinking. Such change is a contest of social forces, as well as ideas. While OST offers the best approach to problem definition, and the changes required, it cannot elaborate the kinds of environmental (especially social) interventions necessary to change the nature of a system and the behaviour of those within it. A theoretical framework combining analysis of the system, and of the changes required (OST), with a model of how change can be enacted (ANT), produces a comprehensive guide to future action where behaviour change is sought

Keywords: open systems theory, actor-network theory, change processes, tobacco control, population level behaviour change

A new method of personal integration: Simultaneous audio-presentation of person-changing memories (SAPM)

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This paper introduces a totally innovative technique of Simultaneous Audio-presentation

of Person-changing Memories (SAPM), the application of which results in a subjective manifestation of personal uniqueness, unity and integrity. SAPM comprises three stages. At the first stage, the subject verbally recollects person-changing episodes from one's personal past. Each story is recorded by an audio-carrier. To achieve the effect of "the internal voice", we change the characteristics of frequency for each record with a sound editor on computer. At the second stage, the audio records are imposed against one other in computer musical editor. As a result all stories can be perceived by the listener simultaneously. SAPM is most efficient when seven to nine stories are imposed for each person. At the third stage, the subject listens to the audio record through ear-phones as many times as he or she deems necessary. While listening to the record, the subject sits in a soundproof dark room. Such listening sessions can be run as a one-time event or regularly. Forty-five subjects participated in the study of the psychological effect produced by the SAPM technique. The majority of the participants reported experiencing an unusual state of mind when listening to SAPM. They reported that their experiences included the feeling as if being out of their body, inner mobilization, time transformation and a panoramic representation of memories pertaining to different ages. We have noticed a significant increase in self-reported personal integrity and a decrease in symptoms of post-traumatic stress disorder and depression resulting from the SAPM method application. Losing a feeling of personal continuity through one's life span is considered to be one of the core symptoms of various psychological disorders. It is associated with the inability to rely on the resource of a personal past in daily routines and when planning the future. The essence of the new technique is that of generating a stereoscopic and momentary overview of the personal past employing memories of turning points in personal development. The technique may be used in psychotherapeutic counseling as a concise and very efficient treatment procedure.

Keywords: simultaneous audio-presentation of person-changing memories, feeling of personal continuity, post-traumatic stress disorder, depression, lifespan

A positive perception of workload makes us engaged and less burned-out at work: A cross-cultural study of the role of positive perception of stressors at work

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This study aims to identify the relationship between a positive perception of workload and its outcomes: work engagement and burnout. Given that cultural variables influence the investigated aspects (Chiu & Kosinski, 1995; Bliese & Jex, 2002), a comparative exploratory analysis was conducted in two European countries (Spain and Poland). The focus of the study was placed on the transactional perspective, the cognitive nature of stressful experiences (Lazarus & Folkman, 1984) and the Positive Psychology approach (Seligman & Csikszentmihalyi, 2000). It was proposed that when employees see workload as a challenge rather than a threat, they should be psychologically engaged in their work and less burned-out. The Maslach Burnout Inventory-General Survey (Schaufeli, Leiter, Maslach & Jackson, 1996), the Well-Being and Work Survey – a reduced version of the Utrecht Work Engagement Scale (Schaufeli, Bakker and Salanova, 2006); and a scale based on the Pressure Management Inventory (Williams & Cooper, 1998) were administered to the 751 social care employees who participated in the study (603 Spanish and 148 Polish). Hierarchical regression, moderated by country, and ANOVA techniques were applied. The main hypotheses were confirmed. Work engagement is predicted in both countries by the perception of workload as a challenge. Lower work engagement is triggered by the perception of workload as a threat. Burnout diminishes if a person perceives their workload as challenging whereas burnout correlates positively with the perception of workload as a threat. Workload perceived as a challenge (both in Poland and in Spain) was related positively to work engagement, and in Poland this relationship was stronger. Spanish employees had a lower level of burnout, a higher level of work engagement, and perceived workload as a threat more than Polish employees. Perception of stressors is crucial in the process of stress, and positive perception of

workload has beneficial outcomes on psychological health. In both European countries investigated, a similar process takes place but it is important to be sensitive to nuances. There may be some additional stress factors that influence the level of burnout and work engagement that were not measured in this study. It is important to emphasise positive work aspects and human strengths, and to teach employees how to perceive work in a positive way to assure healthier work and organisational efficacy.

Keywords: *workload, burnout, stressors, cross-cultural, work engagement*

A qualitative analysis on clients' perceptions of problems treated through psychotherapy

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A person seeks therapy when he/she perceives something as a problem. Perceptions of problems constitute a subjective experience that differs among people. Treating this sensitive issue in an appropriate manner is vital for administering effective psychotherapy. The purpose of this study is to explore clients' individual perceptions of problems. A total of nine subjects (three male and six female) participated in three-session therapy based on a solution-focused approach. Before and after the therapy, each subject was asked to describe his/her perception of the problem. The data obtained was analyzed through the Modified Grounded Theory Approach (M-GTA), a qualitative analysis, to compare pre- and post-perceptions and to examine the change in perceptions. Here, we will present only the results obtained through the analysis of the pre-therapy perceptions to discuss how the problems are perceived by the subjects prior to psychotherapy. The results were: 1. Negative emotions result from a person's perception of a problem; 2. He/she then begins to consider the nature of the problem and worries about its possible outcomes; 3. Negative emotions elicit various reactions in a person: (a) inability to do anything; (b) a tendency to escape from or avoid the problem altogether, which sometimes creates new problems; (c) an attempt to cope

with the perceived problem, during which the person might worry because things are not going well or his/her emotions mediate between hope and despair. It was suggested that the tendency to cope relates to perceived positive factors such as support from other people, aims, and preferences. In conclusion: 1. The results showed that an individual's perceptions of problems are not stable. Instead, they are dynamic with respect to processes including the influence of the problems on individuals, their reaction to problems, and perceived support; 2. The perceptions of problems include positive factors that influence tendencies to cope with the problems. Therefore, we should utilize positive factors to support those who suffer from psychological illnesses; 3. We should also provide support in keeping with the mental status of the individual, as seen in points (a) to (c).

Keywords: *perceptions, clients' perceptions of problems, modified grounded theory approach, perceptions, solution-focused approach*

A randomised clinical trial of a meridian-based intervention for food cravings: Treatment versus waitlist

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Food craving was hypothesised to be an important intervening causal variable in the development of obesity. This randomised, single-blind, clinical trial tested whether The Emotional Freedom Technique (EFT) reduced food cravings in participants under laboratory-controlled conditions. The study involved 96 overweight or obese adults who were allocated to the EFT treatment or the four-week waitlist condition. The waitlist condition received treatment after completion of the test period. Degree of food craving, perceived power of food, restraint capabilities and psychological symptoms were assessed pre- and post- a four week EFT treatment program (mixed method ANOVA comparative analysis), and at six-month follow-up (repeated measure ANOVA with group data collapsed). EFT was associated with a significantly greater improvement in food

cravings, subjective power of food, and craving restraint, than waitlist from pre- to immediately post-test ($p < 0.05$). Across collapsed groups, an improvement in food cravings and subjective power of food after treatment was maintained at six-months, and a delayed effect was seen for restraint. Although there was a significant reduction in measures of psychological distress immediately after treatment ($p < 0.05$), there was no between group difference and significance was not maintained at six-months. There was no difference in weight or body mass index across all time points, but this may change with longer treatment programs. EFT can have an immediate effect on reducing food cravings, results in maintaining reduced cravings over time and, when added to weight loss/dietary programs, may result in assisting people to achieve and maintain reduced food cravings.

Keywords: *food craving, emotional freedom techniques, perceived power of food, craving restraint, body mass index*

A sense of field reality that makes a group situation real

KAKIMOTO, T. (Gunma University)

A new concept to evaluate an experimental situation is developed for the experimental study of intergroup relations: a sense of field reality. Methodological importance of experimental reality has long been appreciated for any experimental study, but its theoretical importance has not been recognized fully for the experimental study of intergroup relations. The present study demonstrates that a subjective sense of reality of an experimental situation is necessary for a group situation to be a "real" group situation. In two experiments, two conditions, with high and low in the subjective sense of reality of the situation, were compared in terms of theoretically important criteria for a "real" (group) situation: participants' group identification and "seriousness" about the situation. First, 47 university students participated in a simulated international society (SIMINSOC) game, where the sense of the reality of the situation was measured at an "opinion poll" in the game, using a scale called the *Sense of Field Reality (SFR) scale*, which has been developed on the basis of a series of theoretical

and empirical studies (e.g. Kakimoto, 2005, 2006, 2008). Second, a revised version of the scale was administered to the 67 respondents in a university lecture. In the SIMINSOC game, the participants with high in the scale score showed significantly more identification with the group ("area" in the game), than those with low in the score, in two self-reported measures out of three. The same pattern was also observed in the remaining measure though statistically marginal. The degrees of group identification by the highs were quite large (means were 4.4~4.6 in the five point scale) whereas those by the lows were moderate (3.1~3.8). In the respondents from the university lecture, those with low in the scale score showed marginally less seriousness about the situation (in the item "engaged in this lecture quite seriously") than those with high in the score. The results in the first experiment clearly showed importance of a subjective sense of reality of the situation for an experimental study of groups. Even in a SIMINSOC game, known as a reality provoking situation, participants identified with the group only to a moderate degree when a subjective sense of reality of the situation was low. This may be due to a relative lack of seriousness, along with other relevant variables, about the situation among participants with low in the sense of reality, implied by the second experiment. Future research is needed to clarify the factors that create the sense of reality of the situation.

Keywords: intergroup relations, experimental reality, group identification, subjective reality, field reality

A strength-based approach to assessment and treatment of children and adolescents

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In recent years, a number of researchers have advocated for a more holistic understanding of human development that includes positive aspects of the individual and their environment. This has been championed by the positive psychology movement and the strength-based

approach that emphasize the need to draw upon positive aspects of functioning in order to overcome adversity. The purpose of this presentation is to provide an overview of the strength-based approach to treatment for children and adolescents that we have applied to diverse clinical populations. The overview will focus on both the theory of strength development and descriptions of studies that have used the strength-based approach in both educational and mental health settings. The presentation will provide a theoretical review of our approach to strength-based treatment for children and adolescents. In addition, the author will introduce the Strength Assessment Inventory, a measure that can be used to assess children's strengths across various domains, and describes how this information can be integrated into assessments and treatment planning. There is strong preliminary evidence that indicates that a strength-based approach to assessment and treatment provides additional information about the client and may be related to improved outcomes when integrated into interventions. The strength-based approach provides a method to engage youths in working towards solving their problems in a collaborative manner. The strength-based approach draws on personal strengths and interests and uses these to overcome adversity. Our research has provided some preliminary evidence for the efficacy of this approach and future studies will be necessary to further clarify the role of strengths in overcoming psychological problems.

Keywords: positive psychology, strength-based approach, Strength Assessment Inventory, treatment of children and adolescents, children's strengths

A study of burnout among French firefighters

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Burnout (BO) is an international phenomenon studied but remains largely unexplored among firefighters (Lavillunière et al. 2007; Lourel et al., 2008). Most studies have tried to apprehend the

BO or through individual characteristics or through the environmental requirements but neglecting the relationship that both could maintain. The objective was to investigate predictors of BO among French firefighters. Two-hundred firefighters mean age of 37.87 years ($SD = 10.95$) completed: the Temperamental and Character Inventory (TCI-56; Rigozzi & Rossier, 2005), Survey of Professional Stress adapted to SP (JSS-F, Marien, Auvert & Michel, 2009), the Maslach Burnout Inventory (MBI; Dion & Teissier, 1994). After multiple linear regression, predictors of symptomatology of BO would mostly be rank and personality patterns ($p < 0.05$). Thus, emotional exhaustion was predicted by demographic characteristics (marital status ($\beta = .175$), rank ($\beta = .205$), years of service ($\beta = -.189$)) and certain personality traits such as temperamental pattern "Persistence" ($\beta = .195$) and character traits "Determination" ($\beta = -.356$) and "Cooperation" ($\beta = -.157$). For depersonalization, the predictors are rank ($\beta = -.238$), family status ($\beta = .155$) and the temperamental pattern "reward dependence" ($\beta = .213$). For the reduction of self-accomplishment, predictors were rank ($\beta = -.225$), the temperamental patterns "novelty seeking" ($\beta = -.210$), "harm avoidance" ($\beta = -.196$), "reward dependence" ($\beta = .203$) and the trait "Transcendence" ($\beta = .136$). Thus, these results show both the presence of vulnerability factors but also protective factors that protect individuals from BO. These findings are particularly interesting because i) they emphasize the importance of differentiating these individuals according to their job requirements and by rank; and ii) they focus on the importance of subjective dimensions in this syndrome. Indeed, according to findings, individuals suffering from these symptoms seem to have particularly high standards. Requirements that are too high can have deleterious effects on psychological well-being. This results in an imbalance between the expectations of the subject and environmental constraints. This can orient some intervention approaches that can access the motivational aspect. In this case, the job could be for a redefinition of goals but also on expanding the flexibility and skills to both business and personal life given the opportunity to respond optimally to environmental constraints.

Keywords: *burnout, firefighters, temperament, professional stress, well-being*

A study of implicit knowledge of creativity in China

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The authors investigated the implicit knowledge of creativity in China. One hundred and twenty eight Chinese (63 men and 65 women) completed open-ended questionnaires on two questions. Two questions were as follows: 'what do you think are the characteristics and behaviors of creative people?' and 'Who is the most creative people in China?' The results showed that, firstly, Chinese people in general have positive perception on the concept of creativity. Smart was listed as the most salient character of creativity. It means that intelligence counts most in Chinese implicit knowledge of creativity. Other traits such as "positive", "daring", "having lot of ideas", "kind", "having lots of knowledge", "original", "weird", "imaginative", and "active" were the ten most cited ones. Males and females had almost the same implicit knowledge of creativity. But differences were found by generations. New generation expressed more negative factors. Regarding the second question, artists/entertainers and politicians were nominated as most creative in the list followed by scientists/inventors, businessmen, writers, philosophers/educators. Artists/entertainers were nominated mostly by new generation and politicians were nominated mostly by old generation. It seems that with the increasing interaction with western countries via international events such as the Beijing Olympics, Chinese people are naturally exposed to the concept of creativity.

Keywords: *implicit knowledge, creativity, Chinese, intelligence, Western influence*

A study of psychological side-effects of abortion on mothers' general health and depression

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Due to various side-effects, abortion could put mothers' mental and physical health in danger. These side-effects may occur during the abortion, after the expected time or even during the next pregnancy. Among pregnant women who referred to health centers in Tehran, we randomly ask 30 persons who had induced abortion and 20 persons who had experienced spontaneous (unwilling) abortion and also 30 women who experienced their first pregnancy, to participate in this research. After controlling for several socio-demographic factors, results from the Beck Depression Questionnaire indicated the highest range of depression was among mothers who experienced induced abortion and then in mothers who had unwilling abortion and at last on pregnant women. Also, the General Health Questionnaire showed highest rate of general health in pregnant mothers than in mothers who experienced induced abortion and the least in mothers who had unwilling abortion. In conclusion, the findings showed that the highest rate of depression and lowest rate of general health occurs among mothers who experienced abortion and thus this needs to be considered as one of main factors that can influence on their recovery.

Keywords: abortion side-effects, mothers' depression, General Health Questionnaire, pregnancy

A study on the relationship between leader-member exchange and organizational justice under the circumstance of communication openness

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Based in Chinese context, this essay explores the relationship between Leader Membership Exchange (LMX), organizational justice and communication openness. This essay will focus on the following three variables: communication openness, LMX and organizational justice, and will probe into the moderating effect of

communication openness between LMX and organizational justice. All the variables were measured by scales developed in western researchers, including the Organizational Justice Scale (Niehoff & Moonman, 1993), Communication Openness Measure (Rogers, 1987), and LMX Scale (Bhal & Ansari, 1998, 2006). Responses were made on a five-point scale ranging from one (strongly disagree) to five (strongly agree). This essay proves the hypothesis model via regression analysis, and the results are: LMX-contribution is positively related to distributive justice; LMX-affect is positively related to distributive justice; LMX-contribution is positively related to procedural justice; LMX-affect is positively related to procedural justice; LMX-contribution is positively related to interaction justice; and LMX-affect is positively related to interaction justice. In addition, Communication Openness is positively related to distributive justice, procedural justice, and interaction justice. Communication Openness negatively moderates the relationship between LMX-affect and distributive justice. Communication Openness negatively moderates the relationship between LMX-contribution and procedural justice. Communication Openness negatively moderates the relationship between LMX-affect and procedural justice. Communication Openness negatively moderates the relationship between LMX-contribution and interaction justice. In this research, we can see that in-group employees have higher organizational justice than out-group ones. This reminds us that the improvement of organizational justice is one of the essential ways to decrease negative effect of low quality LMX. Our research also shows that communication openness has a significant effect on the relationship between LMX and organizational justice, so organizations should be more open so as to decrease the negative influence of organizational justice resulted from low quality LMX. Communication openness may release pressure via free expression and improve productivity by identification with organization goals.

Keywords: leader-member exchange, procedural justice, distributive justice, organisational justice, communication openness

A surveillance study for a street crime prevention intervention

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In this surveillance study of anxiety about crime in one's daily life - commissioned by the National Police Agency of Japan in 2004 - street crime, especially the 'bag-snatch', ranked highly, placing just after the 'break-in' and the 'holdup'. Risk perception is defined as the multiplication of a fear by the expectation of the probability of its occurrence. Kosugi, et al. (2008) revealed how the risk of the street crime was positioned among other risks encountered in the course of life. Although all respondents were students of psychology at various universities, their attitude to risk differed appreciably depending on their sex and their area of habitation. The first purpose of this study was to create segments among respondents with respect to certain categories. The second purpose was to clarify the differences in attitude between the estimated reaction and the crime prevention action of the respondents. The third purpose was to investigate what points of view respondents had, by asking for their impressions of a photograph of the street where a crime had actually taken place. The participants were university students and other people who were part of the citizens' anticrime movement. The questionnaire administered contained a scale to measure fairness to crime, a scale to determine usual crime prevention action, and impressions of some street photographs. It was judged that it was appropriate to divide the respondents into three segments as a result of the latent class analysis. In addition, correspondence analysis was conducted based on the photograph × answer cross-tabulation table, in accordance with the latent classes. This analysis clarified how the view points on the street incidents were different in each latent class. By following these results, we aim to construct a civic education program to strengthen crime prevention actions.

Keywords: street crime, crime prevention, crime education program, risk perception, latent class analysis

ABLE mental health screening of young children: Validity and reliability

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This paper analyzes the psychometric properties of ABLE, a mental health screening tool for young children. The purpose of ABLE is to evaluate the prevalence and severity of concerns parents and teachers have about children's adjustment to school and to identify children who might benefit from early intervention. The paper describes the prevalence of language, behavior and emotional problems in representative and large samples of rural and urban children in the United States of America. Parents and teachers and children were randomly selected from public pre-kindergarten classrooms in six states ($N = 415$) and from a mental health screening of rural and urban children ages 2.5 to 6 ($N = 5,577$) and they completed the ABLE, a two level instrument consisting of a five-minute screening and standardised clinical scales assessing Attention, Behavior, Language and Emotions. ABLE scales had high internal consistencies and strong evidence of construct validity. ABLE identified severe problems in 18.4% of children from parental reports and in 10.5% from reports of pre-kindergarten teachers. By kindergarten, the proportion of children identified by their teachers with serious problems more than doubled to 23%. Inattention/over-activity and behavior problems were identified most often. Children identified as having a serious problem typically had more than one. These children were 3.4 times more likely to be certified for special education services by kindergarten than children not identified with problems by ABLE. However, fewer than 14% of children in public pre-kindergarten identified with serious problems in pre-kindergarten had received the needed mental health services by the end of kindergarten. ABLE is a brief valid and reliable tool that can be helpful in screening early onset language, behavioral and emotional problems which, when undetected, can present significant challenges to children's school adjustment. Unlike many widely used tests of behavior and emotional problems, ABLE does not over-identify poor and ethnic minority children as having adjustment difficulties. Moreover the results of this study provide incontrovertible

evidence of the need for preventative mental health services in early childhood and confirm the value of ABLE as part of a system of mental health service delivery to young children.

Keywords: mental health screening, early intervention, language, behavior and emotional problems in children, adjustment difficulties, behaviour problems

Abstract and concrete sentences, embodiment and languages

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One of the main challenges of embodied theories is accounting for meanings of abstract words. The most common explanation is that abstract words, like concrete ones, are grounded in the sensorimotor system and activate situations and introspection; alternatively, they are explained through metaphoric mapping. However, evidence provided so far pertains to specific domains. To be able to account for abstract words in their variety it could be necessary to take into account not only the fact that language is grounded in the sensorimotor system, but also that language represents a linguistic-social experience. Cross-linguistic comparisons is a promising way to investigate the role played by the linguistic experience. We examined different combinations of a transitive verb and a concept noun, both abstract and concrete, focusing on two syntactically different languages: German and Italian. Thirty-eight students of the University of Hamburg and 38 students of the University of Bologna were required to judge the sensibility of 192 word pairs, selected based on familiarity and probability of use. Compatible combinations (Concrete Verb plus Concrete Noun; Abstract Verb plus Abstract Noun) were processed faster than mixed combinations (Concrete Verb plus Abstract Noun; Abstract Verb plus Concrete Noun). Moreover, with mixed combinations, when the concrete word preceded the abstract one, participants were faster, regardless of the specific grammatical class and the spoken language. The first result is in line with the idea that abstract and concrete words are processed

in parallel systems (Dove, 2009; Barsalou, Santos, Simmons & Wilson, 2008, Borghi & Cimatti, 2009) – abstract in the language system and more concrete in the motor system, making the costs of processing within one system the lowest. The advantage of the first concrete word is probably due to the fact that, when running a simulation, abstract words require more time as a consequence of their peculiar acquisition modality. Results confirm embodied theories which assign a crucial role to both sensorimotor and linguistic experience for abstract words (Barsalou, et al, 2008; Borghi & Cimatti, 2009, submitted).

Keywords: word meanings, sensorimotor system, linguistic-social experience, language

Accountability can improve support for organizational change: Perspective from interest-relatedness

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Along with dynamics of outside surroundings and updating of an organization, research on organizational change has become a hot topic in the field of strategic management, which can determine the existence and development of organization. However, employees always resist organizational change. Studies showed employees' participation in change can make employees support change. It is true that employees' participation of change can bring many benefits for development of organization, but negative effects are also obvious. Some researchers indicated accountability can solve the problem. Based on the social contingency model, the accountability effect and its psychological mechanism under organizational change were explored. With undergraduates as subjects and change of university's mental health education as experimental materials, two experiments were conducted. In Experiment One, 161 subjects including 97 psychological committee members were divided into four groups using a between-subject design, which had accountability and interest-relatedness as independent variables and support for change as dependent variable. In Experiment Two, with accountability and change agents as independent variables and support for change as

dependent variable, 124 psychological committee members were divided into four groups under between-subject design. Experiment one showed that subjects with low interest-relatedness supported change to a significantly higher extent than ones with high interest-relatedness; and accountable subjects supported change to a significantly higher extent than unaccountable subjects under high interest-relatedness, but there were no significant differences under low interest-relatedness. Experiment Two revealed no significant interaction between accountability and change agents on support for change. It is concluded that the social contingency model should add a contingent factor — interest-relatedness between context and accountable entity, and the mechanism of attitude shifting under accountability was cognitive alignment.

Keywords: *organisational change, employees, accountability, change agents, interest-relatedness*

Accounting selfishness in donation? From the perspective of evolutionism

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Generally speaking, donation is considered to be an altruistic behavior. However, some researchers argue that there may also be a part of selfishness in donation. The present paper aimed to give evidence to support the idea that people show selfishness in donation through two empirical studies. Study One aimed to find the selfishness across individuals and Study Two aimed to find the selfishness across race. In Study One, participants ($n = 879$) were randomly assigned to one of six conditions in a 3 (position: supervisor, colleague or subordinate) \times 2 (money: 100 Renminbi (RMB) or 500RMB) between-participants design. Participants were told that their supervisor (or colleague or subordinate) had donated either 100RMB or 500RMB for earthquake relief in China, and then they were required to make a decision about how much money they wanted to donate. In Study Two, participants ($n = 246$) were randomly assigned to one of six conditions in a 3 (position: supervisor, colleague or subordinate) \times 2 (race of donation target: native or foreigner) between-participants design. Participants were told that

their supervisor (or colleague or subordinate) had donated 500RMB for either a fire in their hometown or an earthquake in Italy, and then were required to make a decision about how much money they wanted to donate. The key findings were that when given the information about how much one's supervisor, colleague or subordinate had donated, the participants decided to donate less money than their colleagues, reflecting selfishness across the individual (Study 1), and participants were willing to donate more money for natives than for foreigners, reflecting selfishness across race (Study 2). We didn't find any interaction effect between position and money (Study 1) or position and race (Study 2). Overall, when people do a pro-social behavior such as donation, they also show a piece of selfishness, for the sake of themselves or their own race.

Keywords: *selfishness, donation behaviours, pro-social behaviour, selfishness in donation*

Adapting languages tests from analytical languages such as English into an agglutinative tonal language of the Bantu family: Rasch modeling results

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This paper will present and discuss the Rasch modeling results of the Verbal Analogies and Letter Word Identification subscales of the Woodcock Munoz Language Survey that were adapted into an indigenous South African language, Xhosa. The data were collected using a monolingual two group design (English $n = 186$; Xhosa $n = 189$, grade six and seven South African learners). Rasch modeling was deemed fit for the analysis because of the need to derive sample and test-free item and person estimates for the comparison of the two language versions of the test. The results of the English and Xhosa versions of the subscales will be presented. The results will include the results of a Differential Item Functioning (DIF) analysis. Evidence of scalar equivalence across the two language versions exists. The challenges of adapting language tests from analytical languages such as English into Xhosa as an example of an agglutinative tonal language of the Bantu family, and the strategies that were followed in

adapting the subscales will be briefly presented. The linguistic differences between the two languages and a theoretical understanding of the development of verbal reasoning and letter word identification in reading, across the two languages and language groups, will be used as a framework for the interpretation of the psychometric results. The implications of these results for the adaptation of tests from English to indigenous African languages will be discussed.

Keywords: *Rasch modeling, adapting language tests, verbal reasoning, letter word identification, language surveys*

Adolescent creativity and its subjective representations

BABAEVA, J. (Lomonosov MSU), SABADOSH, P. (Lomonosov MSU)

The aim of this study was to find interrelations of adolescents' creativity, their opinions about its nature and value, and its self-assessment. Russian scholars aged 13-15 years of both sexes completed the adapted Rokeach Value Survey (RVS) and Torrance Test of Creative Thinking (TTCT). Scholars and their teachers were questioned about their implicit theories of creativity: is it inborn or can be nurtured, and what creative work is. Adolescents self-assessed their creativity level and giftedness in various domains; teachers also assessed scholars. Total number of participants was approximately 250. Significant correlations (Spearman's r) were found between TTCT originality scores and RVS ratings: Creativity ($r = 0.31$), Active life ($r = -0.40$), and (in the female sample) Family life ($r = 0.47$). Implicit theory of creativity nurturance also significantly correlated with TTCT originality ($r = 0.60$) and (in the female sample) Flexibility scores ($r = 0.55$). In the male sample implicit theory of creativity nurturance correlated with Development ($r = 0.43$), self-assessed creativity level correlated with the RVS ratings of Wisdom ($r = 0.46$) and Inner harmony ($r = -0.54$). Creativity took a relatively low average place in RVS rates, while creative work is thought of as essentially artistic, not scientific, technical nor social. Adolescents often consider truly creative behaviour as a risky one, vulnerable to criticism and inducing social disapproval; a number of

them perceived school as a place "designed to getting knowledge", and one which "doesn't dispose you to be creative". There was no correlation found between TTCT scores and self-assessed creative giftedness. Adolescents' creative giftedness self-assessment differed from its assessment by teachers, while scholars and teachers did not view creativity in the same way. Actual adolescent creativity level is related to its implicit theories and subjective value (to participants' value orientations, in a more general context). Some gender differences in these relations were found. Creativity value is probably underrated due to expected high social risk and insufficient knowledge of a real demand for it. Test-measured creativity level, a self-assessed one, and those assessed by teacher, do not match. This is apparently because corresponding creativity conceptions vary resulting in use of different creativity criteria.

Keywords: *adolescent creativity, creative giftedness*

Advantageous social inequity for sustainable social motivation: Possible consequences for service organizations

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This study attempted to understand the relevance of "Advantageous social inequity" for sustained effectiveness in service organizations. The equity theory of motivation takes the position that individuals tend to compare their job inputs and outcomes with those of relevant others, and this comparison might result in consequences that could affect quantity and quality of organizationally relevant outcomes. Under the backdrop of Indian culture and some cherished values, the need for affiliation and (higher level) recognition, experimental evidence was obtained on under-graduate student samples, and also on some real life working individuals in service organizations (banks). The data showed that, apart from material gains, there could be other gains for which the phenomenon of equity motivation needs to be understood, and that a perception of over-reward (called advantageous inequity) might be related to a behavior pattern that is conducive to the satisfied existence of the person and quality contribution to the lives of the relevant

others. Further, such “advantageous inequity” may contribute to a heritage of sustained effective behaviour for others to follow and perpetuate. The results were discussed and an elementary theoretical framework of advantageous social inequity based model of sustainable effective behavior in service organizations proposed.

Keywords: *advantageous inequity, service organizations, motivation, sustainable effective behaviour, Indian culture*

Adverse events in psychotherapy

MUNRO, B. (Edith Cowan University)

Since April 2008 health practitioners, including psychologists, working in health care facilities have to implement the National Open Disclosure Standard. Clinical psychologists working in health care facilities, both private and public, therefore have to disclose adverse events to their clients. The Standard defines an adverse event as an incident that results in unintended harm to a person receiving health care. Whilst the Standard is basically a restatement of the ethical principles of veracity and autonomy, the practical implication of it for psychologists is not clear and it is important that guidance should be given to local psychologists in this regard. There is currently no Australian literature on the topic and overseas research is dated and based mainly on anecdotal case study analysis. There is therefore a need to determine how Australian clinical psychologists perceive adverse events in psychotherapy, when they believe they should disclose such events, and how they would disclose such events if they choose to. The participants were psychologists eligible for membership of the APS College of Clinical Psychologists. Working within a phenomenological framework, semi-structured interviews were conducted. Thematic analysis was used to uncover dominant themes. Four dominant themes were identified. The first is that unintended harm is perceived to occur as a result of lapses in clinical technique. The second dominant theme is that unintended harm in psychotherapy is unavoidable. The third theme is that adverse events should always be disclosed. A final theme is that it is inherent in

the psychotherapeutic process that unintended harm should be addressed with the client and that this is a usual part of psychotherapy. The process is also thought to be therapeutically beneficial for the client. Clinical psychologists perceive that adverse events occur in psychotherapy as a result of their practices. They rely on the therapeutic process as a mechanism to work through unintended harm with their clients as soon as it is possible to do so in therapy. The process is still highly individualistic, and guidelines to improve consistency to ensure that adverse events do not go undetected and harm the client should prove to be useful.

Keywords: *adverse events, psychotherapy, open disclosure, clinical psychologists, Australian psychologists*

Affective responses, emotional intelligence and examination performance of university undergraduates

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REVIEWS 2, ICAP (Brief Oral Presentation)

The aim of the research was to examine the link between emotional intelligence abilities, psychological distress levels and mood states among university undergraduates over the duration of a semester of study. The research also focused on the ability to predict student exam performance utilising the constructs of emotional intelligence, psychological distress and mood. This was accomplished through two related studies, both involving data collected from first year students. A sample of 218 undergraduate students from an Australian university completed the Trait Meta Mood Scale (TMMS) to establish their emotional intelligence abilities. They then completed the Brunel Mood Scale (BRUMS) and the Depression, Anxiety and Stress Scale (DASS-21) on three occasions during a university semester to monitor affective responses. Examination performance at the end of semester was recorded. Emotional intelligence was found to influence affective responses, showing a stronger influence on psychological distress than mood states. However, clarity, a component of emotional

intelligence, was more closely related to mood states than psychological distress. Of the psychological distress variables, stress scores showed the strongest influence on mood responses. Psychological distress and mood responses both predicted examination performance whereas emotional intelligence did not. High emotional intelligence among students is conducive to a more pleasant and less distressing university experience but does not appear to benefit examination performance. Further, negative affective responses are not necessarily an indication that students will underperform academically. Indeed high negative affect during the beginning of semester and mid-semester is an indicator of success in end of semester examinations. It appears to be important that negative affect abates during the period from mid-semester to the end of semester. Rising negative affect from mid-semester to end of semester may be an indication that a student is facing difficulties and could potentially fail their examinations.

Keywords: *emotional intelligence, psychological distress, mood states, exam performance*

African Diaspora Dialogue Project

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This paper explores dialogue and reconciliation work designed specifically for African Diaspora populations in the U.S., specifically, those from Somalia and the Great Lakes Region of Burundi, Congo and Rwanda. The paper will explore culturally coherent models of dialogue and reconciliation that incorporate historical issues, current resettlement issues and the integration of traditional peacemaking processes. A capacity building framework where participants become trained in facilitating conversations with their own communities was adopted. Coming from an ethnically diverse continent with a long history of conflict based in colonialism, tribalism, and religious differences, newly arrived African refugees carry these tensions into the U.S. These identity-based conflicts are fuelled by the traumas facing refugee populations and the challenges of transition and resettlement, making successful integration extremely difficult. The result of the challenges just described has

been that groups separate themselves from each other and avoid contact whenever possible. In identity-based conflicts, one of the core elements that contributes to the entrenchment and polarization impeding reconciliation is the manifestation of a zero-sum perception of identity on the part of social groups - parties often feel that the very survival of their own group or identity is inextricably tied up with the negation of the other – that the two literally cannot co-exist. Reconciliation work is deeply rooted around issues of identity and the emergence of new identities developed through the process.

Keywords: *reconciliation, African Diaspora populations, resettlement issues, peacemaking processes, African refugees*

Age differences in work motives

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With an increasing number of older employees in the workforce, there is an increasing need to investigate whether older workers differ from their younger counterparts in work motives. This study examined whether there were age differences in work motives and their impacts on job performance. The sample consisted of 295 Chinese employees aged between 23 and 60 years. Among them, over 60% were managers and the remaining were professionals; and 57% of them were male. They were invited to fill in a set of questionnaires on work motives and job performance. Preliminary results showed that as compared with younger workers, older workers reported a higher level of intrinsic motivation $\{t(293) = -3.11, p <.01\}$ but less internally imposed motivation $\{t(293) = 2.24, p <.05\}$. Multiple regression analysis demonstrated that the positive relationship between intrinsic motivation and job performance was stronger among older workers than among younger workers (age by intrinsic motivation interaction, $\beta = 1.479, p <.001$). The present study reveals age differences in work motives. In particular, older workers tend to have higher level of intrinsic motivation than their younger counterparts. The positive impact of intrinsic motivation on work was found to be stronger

among older employees than among younger employees. These findings provide significant implications to employers to understand work motivation and job performance of older workers.

Keywords: *work motives, age differences, older employees, job performance, ageing workforce*

Aggressive tendencies assessed through a stroop-like discrimination task among combat elite juvenile athletes

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This study was designed to assess whether athletes engaging in combat sports have increased probability of aggression, compared to people not involved in competitive sports. Juvenile elite athletes ($N = 30$; 12 to 18 years old) trained in one of five disciplines (boxing, Olympic wrestling, judo, karate, and tae-kwon-do) participated in the study, along with a control group of sedentary boys from the same age group. Proneness to aggressive behavior was measured by three methods: verbal, behavioral and physiological. A 28-item modified version of Spielberger's STAXI-2 self-report for anger was used, validated for Spanish speakers. Behavioral bias for anger was measured through a computerized emotional Stroop task, using aggressive and neutral word stimuli (matched for word length and lexical probability) derived from a data base of words used in the sports' jargon and presented in six different colors. Physiological reactivity to the computerized task was also monitored. Behavioral and physiological measures were recorded before and after a 90" video clip of a professional fight from the athlete's discipline. Expression of internal aggression increased with age. Martial art practitioners (judo, karate and tae-kwon-do) showed higher interference for neutral thematic words than the rest of the athletes. Boxers exhibited a higher level of self-reported aggression than other sportsmen. Internal control of anger varied with behavioral scores on the Stroop test and with physiological reactivity. The use of three indexes to measure proneness to aggression highlights small differences among

athletes engaging in combat sports that could be overlooked if only one of these procedures was used. Guidelines in training of boxing and martial arts might be responsible for some of the findings.

Keywords: *aggression, combat sports, sport psychology, competitive sports, martial arts*

Alcohol expectancies and self-efficacy beliefs predict drinking in young adolescents: A prospective study

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Social Learning Theory (Bandura, 1969; 1977) has been effectively applied to substance use disorders (Bandura, 1999). According to this theory, the acquisition and maintenance of dysfunctional human behaviours derive from two related but independently operating expectations, outcome expectancies and self-efficacy expectancies. Alcohol expectancies and drinking refusal-self-efficacy beliefs are learnt at a very early age, often before drinking commences. Few early adolescent studies have prospectively examined both constructs to assess their impact on problem drinking. One hundred and ninety-two year nine students (Mean age = 13.8 years, $SD = .51$) were administered the Drinking Expectancy Questionnaire - Adolescent Version (Oei, et al. 2009) and the Drinking Refusal Self-Efficacy Questionnaire (Young, et al., 2007), as well as measures of quantity and frequency of alcohol consumption, and harmful alcohol usage (Alcohol Use Disorders Identification Test; Saunders, et al., 1993). Students were tracked for 12 months, with a follow-up rate of 88.5%. Data were analysed using structural equation modeling (SEM). As expected, lower drinking refusal self-efficacy predicted more problematic drinking, after controlling for baseline alcohol use. Similarly, higher alcohol expectancies were associated with significantly lower self-efficacy and higher alcohol use. However, the effect of alcohol expectancies on future drinking was fully mediated by its strong negative association with self-efficacy, suggesting a more indirect role for

this cognitive construct. Previous research that has only included alcohol expectancies in their designs may have overestimated the role of this construct. Consistent with Social Learning Theory, the pattern of results from the current study suggests drinking refusal self-efficacy may act as a “gatekeeper”, mediating the influence of other risk factors.

Keywords: *social learning theory, alcohol use, adolescence, self-efficacy, expectancies*

'Am I meant to have seen that?' Why are consumer participation rates in mental health so low?

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The introduction of standardised outcomes measurement in mental health services has been an important recent development in Australia. However, consumer participation rates remain low, regardless of the brevity of the measurement tool used. In Queensland, the 36-item Mental Health Inventory (Viet & Ware, 1973) is the self-report measure used for consumer participation. Despite its use being mandatory, the statewide average consumer participation rate remains around 16-19 per cent. The rate varies widely across the state and within health service districts and their individual teams. Given the importance of consumer input into individual care, and into mental health service delivery, these figures remain disappointingly low. This research sought to examine the complex interplay of organisational and instrument factors contributing to ongoing low usage rates. Queensland Health staff from mental health services completed a series of questionnaires designed to examine their knowledge, skills and attitudes towards factors predicted to contribute to low consumer participation rates. These included personal factors such as knowledge of professional and ethical practices in psychological test usage, personal experience of psychological assessment, computer literacy skills, and attitudes towards mental health consumers. Organisational factors were also examined including management attitudes towards psychological assessment, consumer participation, the need for initial and ongoing

staff training and supervision, provision of computer and support resources, and the clinical utility of the Mental Health Inventory itself. An evidence-based understanding of why consumer participation rates remain low is essential so that appropriate changes in current mental health service delivery, staff training, test development and organisational support can occur that will improve the quality of health care provided to mental health consumers and their families.

Keywords: *consumer participation, outcomes measurement, organisational factors, instrumental factors*

An analysis of research trends on career and vocational counseling in South Korea

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The purpose of this study was to provide information about the research trends and topics in career and vocational counseling in South Korea and to compare the Korean trends to those in the United States of America. Publications in two major journals were analysed, the Korean Journal of Counseling (KJC, 90 papers) and the Korean Journal of Counseling and Psychotherapy (KJCP, 63 papers). The papers were classified in terms of the fifteen categories developed by Fitzgerald and Rounds (1989) and this classification was compared to the analysis performed by Loveland, Buboltz, Schwartz, and Gilbson (2006). In addition, issues such as research methodology were examined. The main samples were college students (46.4%), high school students (15.6%), and adults (15.6%). The number of articles within the special field of career and vocational counseling has increased since 2000, but the proportion of career and vocational counseling research amongst the “total” counseling research remained stable at 10~20%. In most of the studies analyzed, assessment tools related to career decision making, career development, interests and aptitudes were applied and the quantitative data were analyzed with inferential statistics. Qualitative research methods were seldom applied in the field. The principal topics of career and vocational counseling research were

'vocational choice', 'decision-making process', 'career development', 'career development interventions', and 'assessment of vocational behavior'. These five categories accounted for 88.0% of the papers analyzed. In the US study, the order appeared to be different: career development, women's careers, multicultural career counseling and programs.

Keywords: vocational training, career counselling, cross-cultural comparison, career decision-making, career development

An applied study of massed and distributed practice trials in the learning of a discrete and continuous soccer skill

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The distribution of practice trials has an important application in skill learning. Research has primarily focused on continuous motor skills with results indicating that distributed practice leads to better performance and learning than massed practice. The limited research on discrete skills has indicated that massed practice is more effective than distributed practice. Researchers, however, have not directly compared skills from one sport and have only used simple motor tasks rather than sports specific skills. Therefore, this study aimed to compare massed and distributed practice on the learning of a discrete or a continuous sport skill. The participants ($N = 155$, $M_{\text{age}} = 19.69$, $SD = 1.76$) practiced a discrete (passing) or continuous (dribbling) soccer skill in either a massed (one second inter-trial interval) or distributed practice condition (inter-trial interval of 30 seconds). Participants completed 20 practice trials, five immediate retention trials (after ten minutes), and five delayed retention trials (after two weeks). Preliminary analysis of the continuous skill indicated a skill improvement across the practice trials, with greater performance changes for the distributed than the massed practice condition. This difference was sustained throughout the immediate retention, with higher practice performance for the distributed than the massed practice condition. At delayed retention, there was no difference between massed and

distributed practice conditions. For the discrete skill, there were no significant differences between the massed and distributed practice conditions during practice, immediate retention, or delayed retention. From the current results, distributed practice leads to better practice performance of the continuous sport skill; however, this did not result in better long-term learning. For the discrete skill, no differences were evident between the massed and distributed practice conditions for performance or learning. We would argue, then, that massed practice is as effective as distributed practice for learning a continuous and discrete sport skill. For applied sport settings, massing practice trials may be more effective than distributing trials because more trials can be completed in a shorter time period. The findings have application in the design of practice schedules for sport specific skills, which will be discussed.

Keywords: sports skills, sport, massed practice versus distributed practice, long-term learning, practice performance

An empirical study of the characteristics of salsa dancers and the impact on mental health and job stress

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The aim of this study is to examine the characteristics of Chinese SALSA dancers, and to conduct empirical studies on the impact of SALSA dancing on individual emotion and job stress. Online surveys and interviews were conducted to develop the item pool of the hobby characteristics of SALSA dancers, and then, exploratory factor analysis was employed based on a pretest of 116 participants, which yielded the final version of the questionnaire. Confirmatory factor analysis, reliability and validity tests were adopted on 257 participants. We compared SALSA dancers and 30 participants involved in other sports in terms of PANAS, subjective well-being and work stress, and measured the pre-and post-effect of SALSA learning. Results showed that Chinese dancers dance SALSA for four reasons, self presentation, self promotion, social restoration and easiness to learn. The subscales and the overall scale displayed acceptable reliability, validity and

fitness to data. Different hobby characteristics were correlated differentially with Big-Five factors; self presentation was positively related with positive affectivity and subjective well-being; those who scored high in self presentation had the highest levels of passion for dancing, followed by self promotion, and easiness to learn; social restoration was not correlated with passion for SALSA dance; self promotion was negatively correlated with education, and positively with dancing frequency. When frequency was controlled for, SALSA dancers of different lengths of time displayed a higher level of positive affectivity than participants engaged in other exercises. Long-term SALSA dancing (three-and-a-half weeks) significantly promoted positive affectivity and lowered participants' negative affectivity and job stress, while short-term SALSA dancing (one-and-a-half hours) significantly lowered participants' negative affectivity and promoted positive affectivity other than job stress. The conclusion is that Chinese dancers dance SALSA for self presentation, self promotion, social restoration and easiness to learn, and SALSA dancing can positively promote mental health and relieve job stress. The practical implication of the findings and directions for future research were discussed.

Keywords: *salsa dancing, job stress, self promotion, well-being, social restoration*

An examination of the relationship between psychological capital and performance in Chinese offshore oil workers

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Psychological capital, a new construct coined by positive psychologists in the last decade, plays a more and more important role in domain of Human Resource Management and is credited to be a key for the talent war in the worldwide. The present study aims to investigate the relationship between psychological capital and job-related outcomes, such as task performance, engagement and satisfaction. Two-hundred and sixty two offshore oil workers and their supervisor from seven platforms in China

responded to the mailed questionnaires anonymously when they were on duty, with an 87% response rate. All of the workers were male and age ranged from 20 to 50 years old. They needed to stay and work at the platform on the sea for 28 days in a session. Psychological capital questionnaire (PCQ), designed by Luthans, Youssef and Avolio (2007) and job performance measures, defined by Borman and Motowildlo, were mailed to the workers and their supervisors respectively. The workers' demographic variables were controlled in the statistical analysis. The results indicate that (1) Workers' psychological capital significantly correlated with their task performance and engagement rated by their supervisor respectively ($r = 0.21$ and $r = .27$). (2) The correlations between the Hope factor in PCQ with task performance, engagement and satisfaction were higher than the correlation of three other factors correspondingly. (3) The relationship between psychological capital and task performance was mediated by engagement. Two main conclusions were made in this study. First, psychological capital is a useful and valid construct and can be used in predicting job performance in the extreme work environment. Second, Hope plays a much important role when workers face a challenging job.

Keywords: *psychological capital, human resources, job-related outcomes, job performance, task engagement and satisfaction*

An exploration of individual differences involved in susceptibility to false memories

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Individuals with Post Traumatic Stress Disorder (PTSD) may be more susceptible to developing false memories, compared to those without the disorder. The aim of this study is to examine trait dissociation and underlying cognitive biases related to threat, as vulnerability factors in the development of false memories for neutral and trauma-related words in a non-clinical population. Eighty-five undergraduate students completed the Deese-Roediger-McDermott (DRM) task for neutral and trauma-related word lists. The DRM is a common false memory procedure where participants are instructed to

remember semantically related word-lists and upon recall often produce a critical lure – a word that wasn't originally presented but is strongly related to the studied words. Following this, participants filled out the questionnaires of interest (Dissociative Experiences Scale-Comparative, Looming Maladaptive Style Questionnaire-Revised, Post Traumatic Cognitions Inventory, Beck Depression Inventory-II), and a word recognition task. The cognitive bias and dissociation scales were all significantly correlated to the reporting of critical lures in either the free-recall or recognition conditions. Regression analyses also supported these findings, whereby those participants scoring high on dissociation, depression or post-traumatic cognitions were more likely to report trauma-related critical lures in the free-recall condition; whereas the looming cognitive style was related to traumatic lure recognition. Cognitive biases related to threat and trait dissociation may be predisposing factors that make an individual more susceptible to taking on false memories in traumatic situations. This study has important implications regarding the development of PTSD, as well as situations involving co-witness discussion and eyewitness testimony.

Keywords: post-traumatic stress disorder, false memories, dissociation, depression, eyewitness accounts

An exploration of nonverbal behaviors collocated with applicant defensive impression management tactics

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Verbal self-presentation tactics comprise the central part of impression management (IM), separated as assertive IM and defensive IM. When it comes to non-verbal behaviors collocated with verbal IM, only positive behaviors have been defined, such as eye contact and smile. However, those are not suitable for defensive IM tactics. This current study is to clarify the content of non-verbal behaviors specific to defensive IM tactics. The method involved: (1) An interview: we ask those interviewees who have had employment interview experiences, to understand what kind

of emotion expression is suitable for different kind of defensive IM tactics, for example, regretful – apology; and (2) Observation: we request those interviewees who have applied for a job vacancy as actors. We provide them with the (verbal) scripts of each kind of defensive IM tactics, and ask the actors to perform them with non-verbal behaviors. The presentation would be recorded as video tapes, then the researchers serve as coders to code non-verbal behaviors. Non-verbal behaviors were categorized as four types in past research: (1) tone, (2) head / face, (3) hand, and (4) body. This categorization is the base for coding, and those behaviors coded from the video tapes can be classified. Finally, the complete non-behavioral content lists come out. In past research, the common measure of assertive IM tactics is “frequency” and that of defensive IM tactics is “to use or not to use”; both are measures of “quantity of IM.” According to the present study, the suitability of non-verbal behaviors can be viewed as “quality of IM.” This work intends to contribute to the literature by bringing up the collocation of verbal and non-verbal IM.

Keywords: impression management, non-verbal behaviours, defensiveness, assertiveness, eye contact

An exploration of the relationship between spirituality and resilience in the context of general well-being

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With the aim to ascertain what accounts for good adaptation under difficult circumstances, this exploratory study examines the correlation between spirituality and resilience in the context of general well-being. Thirty participants (15 males and 15 females) in the age range of 21 to 28 years were administered The Cognitive Behavioural Spirituality Scale (Niederman, 1999), The Resilience Scale (Wagnild & Young, H., 1993) and the General Well-Being Schedule (Dupuy, 1977). These were followed by an extensive semi-structured interview. The data obtained was analyzed using both qualitative and quantitative measures. The quantitative analysis revealed a significant correlation between

resilience and general well-being, between spirituality and resilience in females, and between spirituality and general well-being in males. The qualitative analysis of the narratives revealed a complex matrix of influences that helped shape the individual's subjective understanding of spirituality, diverse descriptions of how individuals understood and observed spirituality, and varied coping strategies used in times of adversity. Based on the findings, a model is proposed of the relationship between spirituality, resilience and general well-being, where spirituality is one of the coping mechanisms used to augment resilience and general well-being. The results have applications in positive psychology and health psychology.

Keywords: *well-being, spirituality, resilience, coping strategies, positive psychology*

An exploration of workplace bullying trauma symptom patterns

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The aim of this paper is to demonstrate that those experiencing workplace bullying (WB) develop psychological trauma that with the exception of Criterion A, meets the diagnostic criteria for Post Traumatic Stress Disorder (PTSD) as defined by *DSM-IV*. We also examine whether a particular pattern of symptoms within PTSD defines workplace bullying trauma (WBT), as treating therapists agree that victims are not only seriously injured but their symptoms present differently to other victims. Although some mental health professionals believe that that a diagnosis of PTSD is appropriate for victims of WB, many disregard the victim's experience. They do not believe that WB bullying meets the *DMS-IV* Criterion A definition of experiencing or witnessing a *physically* life threatening event. Thus they do not recognize it as an appropriate diagnosis in medico-legal systems. As a result, these systems lag behind the practice of treating WB and result in inappropriate diagnoses, treatment, and loss of coverage through workplace insurance programs for targets. We derived participants (approximately 30 from each country) from cases presenting for treatment within the

authors' practices (Australia and Canada) and a snowball sample of participants recruited from bullying websites and word of mouth. Participants were interviewed via three methods (face to face, telephone, or Skype) to determine the presence and severity of WB. Subsequently, we mailed or administered the measures which included the screening measures from *Australian Guidelines for the Treatment of Adults with Acute Stress Disorder and Posttraumatic Stress Disorder* (2007), the *DSM IV*, additional questions probing the relevance and salience of PTSD symptoms, and the Brief Symptoms Inventory (Derogatis, 1993). We hypothesize that participants will report levels of distress on the BSI above norms on the majority of scales. We also hypothesize that scores on the obsessive compulsive, paranoia, and psychoticism scales will be particularly elevated as well as common physical symptoms. We hypothesize that those with elevated distress will meet the criterion for PTSD. There is sufficient evidence to warrant further research into WBT to assist treating practitioner, validate victims, and assist employers and insurance companies to provide effective support.

Keywords: *workplace bullying, psychological trauma, post-traumatic stress disorder*

An exploratory study of demographic and service determinants of mediation outcomes in Australian family dispute resolution (FDR) practice

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This study explored Family Dispute Resolution Practice within the Family Relationship Centre context in Australia by mining archival data. The study investigated the degree to which it is possible to evaluate outcomes of successful mediation by exploring associations among variables such as age, gender, incomes level, occupation, service context, the presence of domestic or family violence, and outcomes in relation to agreements or certifications. The impact of post-separation conflict on children has received much attention of late and as such has been the catalyst for change within the Judiciary/Government (McIntosh, 2004). Family Dispute Resolution (mediation) is now a

compulsory first step for separated families as a alternative to court. The establishment of 65 Family Relationship Centres (15 having commenced operation in July 2006, and 25 more being introduced in each of the two subsequent years) has seen a dramatic change in the way parents resolve conflict post separation in Australia. This does however raise questions of how much we actually know about Family Dispute Resolution, the clients who are utilising this service, and the effectiveness of the Family Dispute Resolution process in providing a successful outcome for the client. The exploratory study used SPSS to analyse archival data from 500 clients who used the Family Dispute Resolution Program and for whom cases are currently closed. Planned analysis methods include frequencies, distributions, correlation regression and analysis of variance and potential analysis of nested groups. The data for this project has recently been retrieved from the data warehouse and is currently being cleaned and prepared for exploration and analysis. Results will help inform future prospective studies and evaluation of interventions. The study will provide useful data on the Family Dispute Resolution process and assist in determining what demographic and service experiences might contribute to successful mediation outcomes. The findings are expected to have implications for theorising, research and practice. Specifically, the implications lie in the design of future research projects which can examine the determinants of healthy co-parenting relationships and whether Family Dispute Resolution is a successful intervention for improving the co-parenting relationship.

Keywords: *family dispute resolution, co-parenting, mediation, separated families*

An integrative approach to job satisfaction and its impact over subjective well-being in European workers

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Work-derived well-being has long been researched from different perspectives, both in terms of its theoretical approach (e.g. situationally-based versus trait-based) and its

methodological design (inter versus intra-individuals, single-item measures versus multiple scales etc). However, few studies have conceived subjective well-being associated with work as a higher-order, multidimensional construct that requires the integration of both personal and situational factors in a systemic way. Along these lines, the objective of the present study is to test a unifying model of the relationship among different categories of factors having an impact over well-being at work. The model proposes that a combination of dispositional factors or *psychological resources* (optimism, self-esteem, autonomy, interest in learning, accomplishment, purpose and resilience), and *situational conditions* (opportunities for learning, chances to show competence, time use options, social recognition and support and belonging) influence the individual's *experience of work* as defined in five dimensions (offering security, autonomy, participation, and being interesting and stressful). The impact of these factors is measured over different dimensions of *satisfaction at work* (getting paid appropriately, general satisfaction with job, perception of work-life balance). The study utilizes a subset of the European Social Survey database (EU15 countries, $N = 16546$), and focuses on the Personal and Social Well-Being Complementary Module (Huppert et al, 2005) and other work-related items were included in the survey. Descriptive analyses and regressions have been run in order to establish initial relations among variables and carry out cross-country comparisons based on national socioeconomic parameters (such as the Employment Protection Legislation Index). The model is currently being tested using structural equation modeling using AMOS software. The degree to which job is experienced as interesting (which is shown to be a function of four variables: opportunities for learning, accomplishment, purpose and recognition) was the main predictor of job satisfaction. Other variables such as the personal-working time balance, the recognition achieved and the estimation of security associated with the job entered the regression equation with a moderate weight. Such general measures of job satisfaction are moderately related to the one-item most used measure of subjective well-being (Life Satisfaction Scale; Diener, 1985). No significant differences were

found for gender or age groups. The analysis of cross-national differences is in progress. Though statistical analyses are currently underway, expected results will allow us to model the construct of subjective work-related well-being integrating the combination of psychological resources and situational factors into a consistent 'work experience' or personal estimation of work characteristics that will have an impact over different measures of work satisfaction (material, time-quality, general). Cross-national differences will also allow us to draw conclusions about the different types of work experiences in Europe and its influence on work-related satisfaction and subjective well-being.

Keywords: *job satisfaction, work-life balance, subjective well-being, psychological resources, experience*

An integrative approach to sexual abuse

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Each client that comes to therapy is unique and so are their problems, thus it is impossible to conceive a standard intervention approach. Still, intervention strategies can be formulated. The case presented is a 13 year old client, sexually abused, who was treated with the help of an integrative approach and had great importance for me as a therapist. In my opinion each client solves a part of the therapist's problems too; the therapeutic relation is not the only one co-created, why shouldn't healing also be co-created? The model to serve as guide has its theoretical and its practical sources in integrative psychotherapy (Evans & Gilbert, 2005), psychosynthesis (Assagioli, 1976), brief therapy (De Shazer, 1985), Ericksonian techniques (Erickson & Rossi, 1979) and the counseling intervention model (Culley & Bond, 2004). Thus, the following domains of objectives become obvious: the co-creation of a therapeutic relation, dysfunctional behaviors (intervention mechanisms, broken contact with the self and the world, identifying sub personalities, emotions, roles etc.), development of a mutual I-Thou relationship (unidentifying of personalities, abreactions etcetera) and reintegration, the client's professional

integration (therapy for knowing our aptitudes and professional competencies in order to make the right decisions). The case was solved, but it also represented the therapist's healing. The therapist's reflexive analysis has underlined the parallel "healing" process. The paper insists on the therapeutic approach addressed to clients and the therapist's reflexive analysis will represent the subject of this paper.

Keywords: *sexual abuse, case study, therapist's healing, therapeutic relationship, co-creation in therapy*

An investigation of the relationship between big five personality factors and procrastination

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This study investigated relationships of the Big Five Personality Factors of neuroticism, extraversion, openness, agreeableness, and conscientiousness, with procrastination. A sample of 207 undergraduate students (79 male and 128 female), from Shahid Chamran University of Ahvaz, completed a Persian form of Tukman's Procrastination Scale (Tukman, 1991) and the NEO_FFI Inventory (MacCray and Costa, 1992). The results revealed that the neuroticism has a positive correlation with procrastination. The personality factors of extraversion, agreeableness and conscientiousness negatively correlated with procrastination, while there was not a significant relationship between openness and procrastination. In addition, the results of regression analysis with a stepwise method indicated that conscientiousness was the only variable that entered into the model. This factor accounted for 58% of the variance in procrastination. The results showed conscientiousness is the most powerful predictor for procrastination among the Big Five Factors. These findings suggest the presence of overlap between procrastination and conscientiousness constructs, as operationalised in Tukman's Procrastination Scale and the NEO_FFI Inventory.

Keywords: *personality, procrastination, big five model of personality, conscientiousness, neuroticism*

An opportunistic qualitative study of the psychosocial benefits of blogging

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Bloggers provided unsolicited commentary on published research by the authors on the psychosocial outcomes of blogging following extensive press coverage of these publications. The authors aimed to a) examine the validity of the original findings utilizing this feedback, and b) further explore the nature of blogging. Blog search engines were utilized to identify blog entries relating to the published research. These entries were then copied in their entirety to word files, including comments by other bloggers. NVivo 7 was utilized to analyze level of agreement with the original research for each blogger (where present) ranging from Hostile to Advocating. Following this, individual blog entries were re-examined line by line for psychosocial references and were coded by theme for further analysis of the benefits of blogging. In analyzing agreement with the original research, the majority of bloggers (80%) either advocated or accepted the results, while only 9% were opposed or strongly opposed to them. In examining for additional psychosocial benefits a number of themes and subthemes were identified. The main themes included social benefits, affective relief, learning, communication, self-knowledge, real-world activities and self promotion. The present research lends some validity to the original findings that blogging may lead to perceived improvements in social support including increased trust in others (reliable alliance), social integration, and satisfaction with friendships both online and offline. Following analysis of the commentary it appears that blogging may have additional utility in terms of personal development and growth, improved interpersonal skills, affective relief, and social capital. While motivations and benefits appear to vary widely by individual, the majority of comments described blogging as personally rewarding and beneficial.

Keywords: *cyberpsychology, internet usage, psychosocial benefits of blogging, interpersonal skills, social capital*

Animal model of PTSD: Behavioral changes following underwater trauma, situational reminders and diazepam treatment

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Ethical and practical limitations in research on human subjects have opened a window to animal research regarding post traumatic stress disorder (PTSD). PTSD modeling is critical in understanding the causes and potential treatments of the disorder. The main purpose of this experimental research was to create an animal model of PTSD based on the main features of the disorder: trauma exposure, situational reminders of trauma, behavioral anxiety and remedy in response to anxiolytic medications. A number of inbred female Sprague-Dawley rats ($n = 6$) at the age of two months, weighing approximately 180 grams, were obtained and evaluated in the elevated plus-maze test in three stages: 1- in the baseline state (before trauma exposure) 2 - after a single exposure to underwater trauma in the Morris water maze (water temperature 25.1 °C, to a depth of 30 centimeters) plus daily (over five days) encountering of situational reminders (observing the Morris water maze and the net basket for pushing rats under water) and 3- after daily exposure to situational reminders and diazepam (0/5 milligrams per kilogram) administration afterward. Measures of open arm ratio time and ratio entry were extracted from five days of five minute video recordings for every stag and analyzed using general linear modelling: repeated measures. Results showed significant increases in anxiety-like behavior relative to the baseline (decreased open arm ratio time and ratio entry) after exposure to underwater stress and reminders ($F:119.231$; $\alpha = 0.008$; Mean difference = 60.587, $\alpha = 0.02$), as well as returning to the baseline level of activity after exposure to reminders plus diazepam administration ($F:393.923$; $\alpha = 0.003$; Mean difference = 56.670, $\alpha = 0.008$). A single

underwater stress together with daily exposure to situational reminders successfully induced PTSD sequels in rats and anxiolytic drug administration decreased the behavioral symptoms.

Keywords: *post-traumatic stress disorder, trauma, situational reminders, diazepam treatment*

Anticipations of the development of job satisfaction as predictors of work-relevant types of behaviour

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The prediction of behavior using knowledge of job satisfaction is one of the aims of measuring this study. However, the aspect of time and dynamic changes of the organizational environment are seldom integrated in the field of job satisfaction. In a system oriented model the variable job satisfaction is seen as an outcome and as a cause variable in a feedback control system. The behavior is assumed to be influenced not only by the level of job satisfaction but also by the anticipation of the development of the organization and the future job satisfaction. The aim of this study is to test the model of job satisfaction and the anticipations of development of job satisfaction in relation to different types of active and passive behavior. The sample consists of 243 employees of an educational institution. Measurements were the Profile Analysis of Job Satisfaction, the scale of Anticipation of the Development of Job Satisfaction, scales for various work-relevant types of active and passive behavior (for example, intention to quit, service quality behavior or knowledge sharing etc.). Analyses support the postulated relationship between job satisfaction and development-estimations. Two different models for a moderating or a mediating effect were tested. The mediating model of anticipation of the development of job satisfaction shows good fits (GFI=.89, AGFI=.85, CFI=.93, RMSEA=.05). Earlier research of the relationship between different forms of job satisfaction and work-related behavior already showed that in comparison to resigned job satisfaction a constructive form of job dissatisfaction was related to more active behavior in the work

context. The results emphasize that job satisfaction together with the anticipations of development in the organization are good predictors of different work-relevant behaviors.

Keywords: *job satisfaction, work-relevant behavior, organisational change, organizational environment*

Anxiety-linked attentional biases in older and younger adults

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Previous research has demonstrated that individuals with high levels of anxiety vulnerability show a tendency to selectively attend to negative information. This attentional bias may play a causal role in the development and maintenance of anxiety symptoms (Mathews & MacLeod, 2005). In this area, some questions remain unanswered: 1) whether the attentional bias reflects facilitated engagement with threat or impairment disengagement from threat; 2) whether the anxiety-linked attentional bias is specific to negative information or favors emotional information general; and 3) whether the attentional characteristics of anxiety vulnerability change with age. The present study aimed to address these questions. The sample was composed of 16 high trait anxious (HTA) and 16 low trait anxious (LTA) young adults (age mean = 18.8, *SD* = 1.8) and 16 HTA and 16 LTA older adult (age mean = 69.2, *SD* = 7.6). Attentional disengagement from and engagement with emotional stimuli were independently measured using a novel task. Participants were required to make a lexical decision about two-letter strings (word or non-word) that appeared in different loci on each trial, one after the other. The dependent variable was the latency to make the second lexical decision, which would be influenced by the time taken to move attention from the initial string. On disengagement trials the initial letter string was a negative, positive or neutral word, and the second string was a non-word. On engagement trials the initial letter string was a non-word and the second was a negative, positive or neutral word. A mixed-design analysis

of variance (ANOVA) was carried out separately on disengage and engage bias index scores, with two between-subjects factors (trait anxiety: high/low; and age: young/older), and one within-subjects factors (negative/positive bias). Only for engage bias scores was a significant interaction between anxiety-group and valence obtained ($F(1, 60) = 4.75, p = .033$). Further analysis indicated that HTA participants were disproportionately slow to engage attention with the positive words. This result suggests that high trait anxious individuals show reduced attentional engagement with positive information. No age differences were found. Possible explanations for, and implications of this finding are discussed.

Keywords: *attentional bias, attentional engagement, anxiety vulnerability*

Appearance-related feedback in intimate relationships: The role of verification and enhancement processes

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This research aimed to investigate the way that females respond to different types of feedback about their physical appearance that they imagined receiving from their intimate partner. The social psychological theories of self-verification and self-enhancement provided a framework for examining these feedback responses in the specific context of physical appearance in intimate relationships. Self-Verification theory proposes that people would be more satisfied in their relationship when their partner sees them as they see themselves, whereas Self-Enhancement theory proposes that people would be more satisfied when their partner sees them more positively than they see themselves. Participants were females who had been with their current intimate partner for at least one year. After completing self-report measures of their self-esteem, body image, and relationship satisfaction, participants received one of three feedback vignettes that described appearance-related feedback from their intimate partner that was either (a) consistent with their appearance self-view (verifying), (b) more positive, or (c) less positive than their appearance self-view. Participants then

completed self-report measures assessing their cognitive reactions (feeling understood), affective reactions (feeling happy) and perceptions of their partner and the relationship in response to the feedback. Results showed that females with negative views of their own appearance responded with more positive affect to enhancing appearance-related feedback whereas they reported a more positive cognitive reaction to verifying appearance-related feedback. In addition, their perceptions of their partner and the relationship were similarly positive following both enhancing and verifying appearance-related feedback. This study was the first to use a more experimental methodology to examine responses to appearance-related feedback in the context of intimate relationships and to examine the impact of appearance-related feedback from an intimate partner on perceptions of the relationship. As such, this study contributes to the existing research in the area of body image and intimate relationships.

Keywords: *relationship satisfaction, body image, gender, intimate relationships*

Applicability of a five-kind personality inventory for college students' personality measurement: A comparison study with the 16PF

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The aim of this research was to study the applicability of a five-kind of personality inventory for measuring college students' personality. In the study, we adopted two measuring tools: a five-kind of personality inventory (Chongcheng Xue & QiuliYang, 1988) which was put forward according to theory of famous medical book "Neijing" in ancient China. Participants were 237 college students (aged 19 to 23 years, 70 male and 167 female). We made a comparison between the five-kind of personality inventory and 16PF for measuring college students' personality. The results indicate that (1) The mean score for male students is significantly higher than for female students in Taiyong (strength) and Yinyangpinghe (equilibrium) dimensions of the five-kind of personality inventory ($p < 0.05, p <$

0.05). Their scores for perfectionism and creativity dimensions in the 16PF are also significantly higher than those for females ($p < 0.01$, $p < 0.05$); but their scores for warmth, privateness and tension dimension in the 16PF are significantly lower than for females ($p < 0.01$, $p < 0.05$, $p < 0.01$). (2) There is no difference between the five personality kind between south students and north ones. However, for 16PF, the perfectionism score of north students is significantly higher than for south ones ($p < 0.01$). (3) Besides reasoning, abstractedness, privateness, openness to change and creativity dimensions of the 16PF, all dimensions of the five-kind of personality inventory correlated with other dimensions of 16PF on corresponding content. The five-kind of personality inventory is available for measurement of college student's personality.

Keywords: *personality, personality factors, creativity, college students*

Application of a process model of health motivation in physical activities

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Previous studies have shown that health motivation can enhance physical activities. Although researchers have used the term health motivation for a long time, there is no widely accepted definition or theoretical model of health motivation. In my recent studies, I defined health motivation and suggested a process model of health motivation. The present study aimed to investigate whether this model can capture individuals' health motivation in physical activities and whether this model can predict people's physical activities. One of the significant aspects of this study is that it can enrich the theoretical research in health motivation. I believed that health motivation produces inner force which energizes and orients individuals' health related behaviors. Based upon this definition, I proposed a process model of health motivation. This model indicates that health motivation guides individuals' health-related behaviors in the following consequential four-step process: to develop health motivation tendency, to form health intention, to initiate health related action, and to

persist in those actions to achieve goals developed at the first stage. Upon this model, the Health Motivation Scale in Physical Activities (HMS-PA) was developed, with 12 items in total. The present study examined the construct validity and predictive validity of the scores obtained using the HMS-PA among 251 undergraduate participants in a southern university of the United States of America. The higher order confirmatory factor analysis suggested that the model fitted the data well. The predictor power of health motivation, health self-efficacy, health value, and Body Mass Index were examined using multiple regression analysis. The finding indicated that health motivation was the most powerful predictor of physical activities. Interestingly, health self-efficacy was not shown to be a statistically significant predictor of physical activities. In conclusion, the proposed theoretical model of health motivation and the scale were effective in capturing individuals' health motivation. Health motivation significantly contributed to physical activities. This model and the scale can be applied to related theoretical and empirical studies.

Keywords: *health motivation, physical activity, health related behaviours, health intention, health self-efficacy*

Application of the individual zone of optimal functioning (IZOF) model for a team

MINOUCHI, Y. (Hokusei-Gakuen University)

The Individual zone of optimal functioning (IZOF) theory by Hanin (1997) is that there are individual differences in the appropriate emotional state for individual sport performance. In other word, there is an individual variation in effective emotions and in the optimal level of emotions for performance. In the research on a current IZOF model, individual athletes' emotional states have been examined. However, it was thought that the idea of appropriate psychological state is different depending on individuals was able to be applied also to sports teams. Therefore, the aim of this study was to examine whether the appropriate emotional states for the team is determined. Another aim of the present study was to verify

whether controlling the emotional states contributes to improving and stabilising team performance. Subjects were from a female rhythmic gymnastics team of a high school (five female players). The investigation period was five months from April, 2009 to September, 2009. The procedure involved, firstly, identifying the best performance and the worst performance in the team. Next, the emotions (key words) that related to the team performance had been extracted by discussions with the team. After that, the emotional states and the performance of each official competition were evaluated. It was surveyed three times. After the competition had ended, team state before and during the competition was evaluated. The emotions and the terms that strongly influenced the team performance were searched out by comparing the best performance and the worst performance in competitions. As a result, "Confident", "Worried", "Enjoy", and "Motivated" were chosen. It was clarified that "Confident" related to the expression of their face, "Worry" related to the switching of feelings, "Enjoy" related to the enchanting the spectators, and "Motivated" related to uniting for a team. We tried the control of the emotions in the competitions because the antecedents of the emotions were identified. As a result, the performance was stable to compare before. It was suggested that controlling of antecedent behaviors leads to integration of the team and to enhancement of team performance. It is thought that it will be necessary to examine the effective methods for appropriately controlling strength of the key emotions, and to use it in other competitions in the future.

Keywords: optimal functioning, emotional states, sport, competition

Application of Versatile Leadership Model and Leadership Versatility Index® in a different cultural context

JAROSOVA, E. (University of Economics), PAVLICA, K. (Škoda Auto University)

The brief oral presentation is focused on the application of Versatile Leadership model and Leadership Versatility Index® (LVI) developed by R.B. Kaplan and R.B. Kaiser in the United States

(US) in a different cultural context - in the automobile company Škoda Auto,a.s.(a part of Volkswagen Group, the largest car manufacturer in Europe) located in the Czech Republic. The aim of the LVI Škoda Auto Project was to verify the LVI and its value for Czech managers from international company. The Leadership Versatility Index® is a 360-degree feedback survey which collects the data from direct reports, peers and superiors as well as from the target manager himself or herself. It contains 67 items and it is completed by open-ended questions. The LVI is based on a model of versatile leadership. Its structure has four independent subscales for each dimension of two major pairs of opposites: enabling and forcing leadership and operational and strategic leadership. The LVI was used on a sample of the Czech managers ($N = 14$) twice – in 2008 and in 2009, followed by feedback and coaching sessions. In the meantime the managers completed their personal development plans. The comparison of the data collected on the Škoda Auto sample with the data in Kaplan DeVries Incorporated normative database (with ratings for 1 123 senior managers) identified no significant differences on the level of overall versatility assessment. Most of the managers from the Škoda Auto sample inclined towards leadership lopsidedness on a level of forceful-enabling dimension – in correspondence with the same trend in the sample of US managers assessed by the LVI. The analysis of the personal development plans enabled us to record how the LVI results helped Czech managers to identify their own excesses and deficits in the execution of managerial role. The LVI is a useful and well-accepted assessment tool also in a Czech cultural context. The Skoda Auto Project confirmed that the LVI - based on a model of versatile leadership – it helps managers to understand their multiple, even contradictory roles and to deal with their paradoxical demands.

Keywords: leadership versatility, leadership, cultural context, management, automobile company

Applied use of emotional intelligence data at the Anglican Church Grammar School

WELLHAM, D., SIMMONS, N. (Anglican Church Grammar School), STOUGH, C. (Swinburne University), HANSEN, K. (Swinburne University)

The aim of this presentation is to describe the ways in which emotional intelligence research is used to support students and families at an independent School for dayboys and boarders. The School has 1700 students from Reception to Year 12. Emotional intelligence (EI) research in education is in its infancy. Churchie is a research partner with Swinburne University with the aim of developing knowledge of self and others within our student population via longitudinal research and collaboration. This presentation will outline the methods used by the School to elicit EI data and to track students with respect to planning for successful academic and social-emotional outcomes. All students in Years 7 to 12 in 2009 will have had their Emotional Intelligence measured using Swinburne University Emotional Intelligence Test (SUIET). The SUIET has four core areas of focus: (1) Emotional Recognition and Expression; (2) Understanding Others' Emotions; (3) Emotions Direct Cognition; (4) Emotional Management and Control. It is known that the population mean score for each of the four emotional intelligences is 50. Emotional Management and Control is a key factor in academic performance and Churchie's Year 12, 2009 mean score was 80; Understanding Others' Emotions is also regarded as a significant factor and Churchie's mean is 55; Emotional Recognition and Expression have not been shown to be a significant factor in academic performance and Churchie's mean was 50; and Emotions Direct Cognition may affect thinking and performance in certain academic areas with creative arts and maths thinking affected differently by this EI trait – Churchie's EI mean was 51. Strategies for improved academic outcomes through an EI specific language and framework in the curriculum and overt EI strategies to be further developed throughout the curriculum will be outlined.

Keywords: *emotional intelligence, education, academic performance*

Appraising the future: The development and validation of the Future-Oriented Appraisal (FOA) measure

DRUMMOND, S. (Griffith University), BROUGH, P. (Griffith University)

This study develops and validates a measure of future-oriented cognitive appraisal in response to current discussions concerning future-oriented coping behaviours. Both proactive and preventative coping represent future-focused efforts to manage potentially stressful future events. The differential is in how the (potential) stressor is appraised. Proactive appraisal focuses on identifying the benefits and opportunities that can arise from the upcoming event, whereas preventative appraisal identifies methods to reduce the potential negative consequences. The development of a measure incorporating *both* types of appraisal enables stress and coping theoretical models to be assessed within a future-oriented paradigm. A 30-item measure was initially developed based on the proactive-preventative discussions within the literature. The 30-item measure was administered twice to a total of 316 university students over a six month period. Using principal components analysis, four factors (19 items) emerged from the initial administration, accounting for 67 per cent of the variance. For the purposes of this research, the four factors were combined to produce two higher order factors representing proactive and preventative appraisal. These two higher order factors demonstrated acceptable internal consistency (.82 proactive appraisal, .87 preventative appraisal) and strong test-retest reliability (.83 and .82 proactive appraisal, .88 and .91 preventative appraisal). The measure was related to personality characteristics (e.g., neuroticism, conscientiousness, and optimism) and psychological health outcomes (e.g., psychological strain) thereby demonstrating criterion validity. Initial results indicated that the measure provides a good assessment of future-oriented cognitions and therefore marks an exciting advancement in the testing of stress-strain processes within a future-oriented paradigm. The adoption of proactive or preventative appraisal for an anticipated potentially stressful event has significant implications concerning the subsequent activities undertaken to cope in response to that event.

Keywords: *Future orientation, Proactive and preventative coping, Proactive and preventative appraisal*

Are the eyes the window into what drives the own-race bias?

HILLIAR, K. (University of New South Wales), KEMP, R. (University of New South Wales)

The own-race bias refers to the tendency for people to recognise faces from their own racial group (same-race faces) better than faces from a different racial group (different-race faces). This bias has important implications for a broad range of areas, from promoting cross-cultural interactions, to having confidence in the eyewitness identifications of different-race suspects. The aim of this experiment was to investigate whether this bias is due to any differences in how participants look at same-race and different-race faces, either at study or at test. Participants were presented with ten same-race and ten different-race faces that were presented either individually, or in pairs (same-race/same-race, different-race/different-race, and same-race/different-race pairs). Participants' viewing of each face/pair of faces was self-paced. After a two-minute filler task, participants were presented with these 20 'old' faces, along with 20 'new' faces, and had to decide whether each face was old or new. Eye movements and fixations were recorded throughout the experiment. Although participants showed a small own-race bias in their recognition accuracy for the faces, this difference in performance was, unexpectedly, not associated with any differences between same-race and different-race faces in terms of the length of time spent looking at these faces, the areas of the faces observed the most (i.e. internal versus external features), and the speed that old/new decisions were made. Amount of contact with different-race faces was also found to be unrelated to different-race recognition accuracy. Participants looked longer at faces that were presented individually compared to those presented as part of a pair, but viewing times and strategies did not differ across the three different types of face pairs. These results suggest that the own-race bias is not due to any differences in the strategies people use when encoding (at study) or reviewing (at test) same-

race and different-race faces. Thus, despite using the same strategies, participants still show an advantage for same-race faces. A better understanding of the mechanisms that do (and do not) underlie the own-race bias will allow development of more effective interventions for reducing this bias, and thus minimising its negative social and legal consequences.

Keywords: *race-bias, face recognition, cross-cultural, eye movement, race*

Are the Identity Foreclosures different from the Identity Achievers in terms of career decision process?

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According to Brisibin and Savickas (1994), the measures of career indecision do not discriminate between achievers, who are committed to self-chosen goals, and the foreclosed who are committed to goals chosen by significant others without exploring alternatives. However, the measures used in this research are limited. This study investigated whether it is possible to distinguish foreclosures from achievers using measures related to career decision and career maturity. In Study 1, four hundred and thirty-three college students (233 males and 200 females) completed the revised version of Extended Objective Measure of Ego Identity Status (EOM-EIS2), the Career Decision Difficulties Questionnaire (CDDQ), and the Career Preparation Behavior Inventory. In Study 2, four hundred and twenty-two college students (205 males and 217 females) responded to the revised version of Extended Objective Measure of Ego Identity Status (EOM-EIS2) and Career Attitude Maturity Inventory (CAMI). The identity foreclosed students experienced more difficulties in career decision making than the identity achievers. Especially, identity foreclosed students experienced more dysfunctional beliefs, lack of motivation and/or indecisiveness. However, they showed the same high level of career preparation behavior as the identity achievers. With regard to career maturity, the foreclosed students had lower scores than the achiever. On the subscales of

decisiveness and preparation, the achievers and foreclosures did not differ. However, in goal-orientation and independence scales, the foreclosures scored significantly lower than the achievers. In contrast to the results of Brisbin and Savickas (1994), this study showed differences between identity foreclosures and achievers suggesting a possibility of separation.

Keywords: *job selection, individual differences, assessment, career counselling*

Assessing the training and staff development needs of power sector employees

RANA, N. (Gautam Buddha University), KRISHNA, S. (Uttarakhand Power Corporation Limited), PRAKASH, V. (University of Petroleum & Energy Studies)

The recent past has seen the Power Sector change substantially in its institutional arrangements for its regulation as well as the structure of the industry in itself. Major changes are being introduced in the Power Sector through private participation, reforms, restructuring apart from technological and perceptual changes that are also taking place simultaneously. This churning process has deeper implications on manpower engaged in this sector. This paper seeks to document the nature of HRD at organizational level in India. Following a brief sketch of the Indian context, we draw on the National Training Policy. The purpose of this study was to: (1) Determine training needs for an Indian State Power Corporation; (2) Determine the course content; (3) Identify training providers, delivery methods and likely training. A case study was done at Uttarakhand Power Corporation Limited, using questionnaire and personal interviews for training needs identification, job and skills analysis. The results discuss the following points: Training currently available; Problems with current training provisions; Recommended training providers and experts to be approached for any new provision; Opinions regarding training format for new provision: advantages and disadvantages of each format; Feature of the training: case studies, levels, modules and assessment; Training support material recommendations; Constraints when providing

training. Every employee has a right to receive need based training at regular intervals to enable him/her to develop his/her potential to the maximum and contribute his/her best to the organization. The ultimate goal of each training course is customer satisfaction through reduction in cost of delivered power and supply of reliable and quality power at adequate and improving levels of efficiency and accountability.

Keywords: *India, training, skills analysis, employees*

Assessment and management of anxiety and depression in married, unmarried and separated adults

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The aim of this study was to evaluate the anxiety and depression levels in a sample of married, unmarried and separated adults and to determine whether cognitive therapy is effective in reducing the levels of anxiety and depression in participants who reported very high levels of these emotions. A cross-sectional design was used by administering adapted versions of anxiety and depressive symptoms checklist scales to 300 married, unmarried and separated adults. Those reporting high levels of anxiety and depression would then participate in a short intervention program using Ellis's and Beck's cognitive therapy techniques. Emerging results from the first part of the study tend to indicate that unmarried adults are reporting higher levels of anxiety and depression than married and separated adults. It is also expected that cognitive therapy would significantly reduce anxiety and depression in the participants allocated to the intervention program. Emerging results from the first part of the study tend to reflect the impact of the pressure arising from cultural expectations which consider it culturally abnormal not to be married after age 30, or to be married but separated, and that the impact is greater for unmarried adults. Reduction in anxiety and depression levels after intervention would reflect the efficacy of cognitive therapy.

Keywords: *marriage, depression, anxiety, cognitive therapy*

Assessment and management of equal opportunity and diversity in the U.S. military

CREPEAU, L. (Defense Equal Opportunity Management Institute), PARKS, K. (Defense Equal Opportunity Management Institute), VANDRIEL, M. (Defense Equal Opportunity Management Institute), MCDONALD, D. (Defense Equal Opportunity Management Institute)

The U.S. Department of Defense (DoDD 1020.02) defines equal opportunity (EO) as “The right of all military personnel to participate in and benefit from programs and activities for which they are qualified. These programs and activities shall be free from social, personal, or institutional barriers that prevent people from rising to the highest level of responsibility possible.” EO ensures all members receive the same opportunities to compete for rewards through superior performance. The U.S. military recognizes the need to accurately assess and manage EO, since members’ perceptions that fair treatment is accorded to all garners improved loyalty to the organization, generating greater trust and commitment, thereby maximizing readiness, that is, the ability of the organization to complete its mission. The Defense Equal Opportunity Management Institute (DEOMI) Equal Opportunity Climate Survey (DEOCS) assesses EO climate and traits reflecting organizational effectiveness (OE), that is, organizational trust and organizational commitment. Data from the 500K+ completed surveys completed annually characterize the relationship between EO and OE. Diversity management (DM) is the process whereby all workforce members’ individual talents, skills, and interests are accurately identified and leveraged to maximize readiness. Successful DM requires employing explicit policies and procedures that include assessment, mentoring, education and training, and optimal job assignment. Diversity management demonstrates to an organization’s members that they are appreciated for their unique contributions, and provides them with an elevated sense of participation and belonging, which further enhances their sense of commitment to the organization. DEOMI recently developed the DEOMI Diversity Management Climate Survey (DDMCS) to target

command DM practices, enabling us to extend our research beyond the simple EO–OE relationship. Moreover, by linking the DEOCS and DDMCS, DEOMI can now directly determine the differential influence DM exerts on measures of OE. These data will be used to characterize various groups’ (e.g., women, minorities, junior enlisted, etc.) perceptions of DM practices; ultimately these results will be used by DEOMI’s Research Directorate to advise DoD policy.

Keywords: equal opportunities, diversity management, organisational effectiveness

Assessment of readability and audience rating of the large electronic paper signage in a Japanese subway station

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Electronic paper signage is thought to be useful for advertisements and emergency signs in the public space because it is light and energy-saving, and it can alternate content quickly and easily. It can also continue to display content even after the power supply is interrupted. In Sendai, Japan, large sized electronic papers (1539 mm width X 964 height) are used for digital signage in the subway stations. We evaluated the readability of the text in the electronic paper signage in a subway station, and compared the audience rating for the electronic paper signage and existing advertising signs. First, we conducted a survey on the readability and satisfaction of the content with 201 subway users. We displayed text in three sizes (92, 60, and 44 mm, i.e., 1.32, 0.86, and 0.63 degrees visual angle from four metres away, respectively) and asked them to evaluate the font size, easiness to read, display speed, and satisfaction with the content on a five-point scale. Each display contained approximately 130 characters and it changed every 15 seconds. We also observed the behavior of the subway users waiting for the train in front of the electronic paper signage and existing advertising sign. The results from the survey suggested that in an indoor public space with the 500 lx illuminance, a large-sized electronic paper display will be comfortably read with the size of 0.56+ deg in

visual angle and the reading speed of eight characters per second. The subway users were quite satisfied with the content, and news and weather forecasting were especially popular. In direct observation, we found that subway users viewed the electronic paper signage significantly longer and more frequently than existing advertising signs ($p < .05$). The audience rating was especially high when the content was switched. These results will allow us to optimise the font size and display speed for the text in the electronic paper signage. They showed that changing content catches the eye of viewers and holds their attention longer. Inserting non-advertising content may also be helpful to hold the viewer's interest in the advertising content.

Keywords: *readability, audience rating, electronic signage, Japanese, subway*

Attention to graphic cigarette warning labels in smokers, ex-smokers and non-smokers

HOLLIER, T. (Southern Cross University), PROVOST, S. (Southern Cross University)

Do smokers notice anti-tobacco warning labels more, or are they so familiar with the labels that they have lost their impact? New graphic warning labels form part of a "fear appeal" strategy to reduce smoking behaviour. Smokers, ex-smokers and non-smokers were tested in an Attentional Allocation Task, to identify the speed of orientation and disengagement towards warning labels. All groups showed an orientation effect to the graphic, but smokers and ex-smokers also showed evidence for facilitated disengagement of attention. These results suggest that smokers and ex-smokers are avoiding the warning labels, reducing their effectiveness in smoking prevention.

Keywords: *Tobacco-warning labels, Attentional allocation task, Smoking, Orientation effect*

Attentional bias to emotional facial expressions in dating violence survivors: A behavioral and eye-movement study

LEE, J. (Chung-Ang University), LEE, J. H. (Chung-Ang University)

Dating violence (DV), including physical, psychological, and sexual violence, in dating relationships has negative consequences, such as depression, anxiety, and Post Traumatic Stress Disorder (PTSD). Research on attentional bias has demonstrated that individuals with PTSD are associated with trauma-related hyper-vigilance. However, previous studies using Stroop tasks and dot-probe tasks have not provided the exact nature of attentional processing. We adopted an eye-tracking methodology to investigate attentional bias in DV survivors. The aim of this study is 1) to examine the time course of attentional bias for emotional facial expressions in DV survivors using a dot-probe task and eye-tracking, and 2) to assess the emotionality hypothesis using angry, fearful, and happy facial expression stimuli. Thirty female participants will be recruited using the Conflict Tactic Scale (CTS2) and an interview. The DV group ($N = 15$) will have had dating violence experiences and the non-dating violence (NDV) group ($N = 15$) will be the control group. Sixty-four faces (angry, fearful, happy, neutral faces, 16 each; 50% male) will be selected and each emotional face will be paired with a neutral face. Each trial will begin with a fixation cross (1000 milliseconds), followed by a pair of faces presented side by side (500 to 2000 milliseconds). Participants will be instructed to press one of two keys as quickly as possible to indicate the location of the probe. Participants' eye-movements will be recorded during the dot-probe task using an eye-tracker. This study is currently in progress. We predict that the DV group will initially fixate more on the negative stimuli (angry and fearful), compared to the NDV group. The DV group's gaze will also be sustained for longer intervals towards the negative facial expressions compared to the NDV group. Based on reaction time results, we expect the DV group will show hyper-vigilance towards the negative stimuli, as well as a difficulty in

disengagement from the negative facial expressions. The findings of this study will support the evidence that individuals with DV survivors are associated with vigilance-rumination patterns more than vigilance-avoidance patterns, and may also help in clarifying the attentional processing mechanisms of DV survivors.

Keywords: dating violence, post-traumatic stress disorder, vigilance-avoidance patterns, attentional processing, trauma

Attitudes to the insanity defense: An Australian sample

JOHNSON, M. (Margaret Johnson Psychological Consultancy Services), TYSON, G. (Charles Sturt University)

This study examined attitudes to the concept of insanity as it is applied in the Australian legal system and whether these attitudes could be seen as 'prototypes' or 'implicit theories of the concept of insanity. Participants were drawn from three subgroups: members of the general public, psychologists and members of the legal profession. They were asked to complete three questionnaires: the Conceptions Checklist, the Legal Authoritarian Questionnaire and the Insanity Defense Attitudes Scale. They were also asked to read a case vignette and render a verdict on the case. Prototypes of attitudes were able to be identified in the data obtained from the conception checklist. These prototypes could then reliably predict how a person would make judgements regarding the culpability of a defendant with a mental illness. They also factored into how a person viewed the legal use of the Insanity Defense and how the law treats those who are mentally ill. Opportunities for further research into how jurors make decisions were identified.

Keywords: insanity defense attitudes, juror decision-making, Conceptions Checklist, Legal Authoritarian Questionnaire, Australian legal system

Attitudes towards deception and lying

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Deceptive style of communication assumes a strategy of persuasion which aims to influence the beliefs, attitudes and behaviours of others. In this work we offer the results of an Attitudes to Deception and Lying questionnaire (Ac-EM) that has so far demonstrated empirical validity and value of content in isolating the proposed constructs. We studied the relationship that such attitudes have with 20 factors for personality (using ATRAMIC) and four factors for self-esteem (using CAE). The sample comprised 306 adults, 193 men and 113 women, with an average age of 37. In the sample, 157 participants were single, 101 married and 48 divorced. We offer the results of the factor analysis for each factor, internal consistency (Cronbach Alpha) and the correlation between measures for the different factors of the Ac-EM, CAE and ATRAMIC questionnaires. For the results from the Ac-EM questionnaire, two attitudinal factors, Acceptance of deception and lying (18%; $\alpha = .71$) and Rejection of deception and lying (16%; $\alpha = .72$), explained 34% of variance. From the correlational analysis of the measures of the different factors, we noted that the attitude of Acceptance of deception and lying correlated positively and significantly with the factors for failure to make adjustments when lying ($r = .28$; $p \leq .001$), not being honest or confessing that one had lied ($r = .36$; $p \leq .001$), self-deception ($r = .40$; $p \leq .001$); fear of rejection and criticism ($r = .38$; $p \leq .001$), extreme caution ($r = .33$; $p \leq .001$), insecurity ($r = .26$; $p \leq .001$), distrust ($r = .40$; $p \leq .001$), hypercontrol ($r = .27$; $p \leq .001$) and lack of sensitivity to others ($r = .33$; $p \leq .001$). This attitude correlated negatively with the variables for empathy ($r = -.28$; $p \leq .001$), assertiveness ($r = -.23$; $p \leq .001$), self-control when lying ($r = -.15$; $p \leq .01$), being coherent ($r = -.28$; $p \leq .001$) and being consistent ($r = -.35$; $p \leq .001$). From the self-esteem questionnaire, the attitude of acceptance correlated positively with the feeling of uselessness ($r = .22$; $p \leq .001$) and the feeling of inferiority ($r = .15$; $p \leq .01$), and negatively with valuation of others ($r = -.21$; $p \leq .001$). The attitude of rejection correlated positively and significantly with guilt, self-criticism, empathy, social desirability, selective privacy, being transparent, control, being coherent and being

consistent. The data that we found in this work significantly support the convergent validity for the combination of the variables in the attitudes and personality questionnaire (ATRAMIC), Attitudes to Deception and Lying questionnaire (Ac-EM) and the self-esteem questionnaire (CAE).

Keywords: *attitudes to deception and lying questionnaire, self-deception, self-esteem, deceptive communication style, honesty*

Australian adult male help seeking for body image concerns

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The body image of Australian males has received increased attention in recent years particularly following the findings by Mission Australia reporting that body image was the number one concern for boys/men aged 12 to 25 years (2008). Concerns about the body outweighed concerns with career/job, relationships, and family. Despite this concern over their body image men are reluctant to come forward and seek help for their body concerns. This paper addresses this issue and discusses a survey conducted with Australian males over 18 years of age as to their help seeking behaviour. In particular what would assist them in coming forward and seeking help. The 40 university men surveyed reported that knowing that what they said was confidential as well as reassurance that they would get something out of help seeking was important to them. The majority stated that they would be more likely to seeking help from a personal trainer or gym instructor than a doctor and mental health specialist including a psychologist. They felt there was some stigma around help seeking from a mental health professional but not to a fitness instructor. These findings have implications for the way professionals market the service as well as society's role in destigmatising concerns in men and their subsequent help seeking.

Keywords: *male body concerns, help-seeking, stigma, body image*

Australian Army as a "Learning Organisation": Measuring organisational

learning characteristics and organisational trust within a military institution

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The Australian Army intends to become a "learning organisation". This study aims to benchmark the practices known to be indicative of a learning organisation within and across a military institution, at an individual, group and organisational level. This environment differs substantially from most previously studied. The profile will allow the Army to determine and potentially improve its performance on learning organisation characteristics. The Army Learning Organisation Questionnaire (ALOQ) was adapted from existing learning organisation questionnaires (Marsick & Watkins, 2003; Goh & Richards, 2005) and consists of 11 subscales including; innovation, teamwork, knowledge systems and leadership. It also includes measures of organisational trust (Cummings & Bromiley, 1996) and attitudes towards change (Dunham et al, 1989, in Haque, 2008). The ALOQ items were piloted with Army personnel before the questionnaire was administered. In November 2009, 326 Army personnel from across all ranks completed the questionnaire at one Army location. The Army units' mean scores, on learning organisation subscales, were comparable to normative data supplied by Marsick & Watkins (2003) and Goh & Richards (2005). Further analysis found that rank had a significant effect on these subscales: innovation, strategic leadership, holistic perspective, and organisational trust. Higher ranks tend to perceive higher learning organisation characteristics. The ALOQ organisational learning subscales were also found to be strongly correlated ($r = 0.7$ and above). These initial results suggest that practices within these Australian Army units, in terms of learning organisation characteristics, are similar to other (mainly private) companies or organisations. However, individual-level factors (such as rank) are likely to impact on learning organisation

characteristics at the group and organisational level. In early 2010, the ALOQ will be administered to Army personnel around Australia, allowing further exploration of the enablers and inhibitors of organisational learning within a military institution.

Keywords: military, Army Learning Organisation, organisational trust, strategic leadership

Barriers and bridges to intercultural communication on a large university campus: Political and developmental influences on the meaning and impact of communication on personal and institutional levels

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This paper presents findings of a research study conducted at a large University in the Southeastern United States on the Quality of Intercultural Communication among faculty, staff and students. Five focus groups were conducted which included students, faculty and staff exploring participants beliefs about and perceptions of the quality of intercultural communication at the University. Qualitative analysis revealed Core Ideas in the Domains of Barriers, Bridges and Strategies to enhance intercultural communication on both individual and institutional levels. Consistent with Developmental, Multicultural and Feminist theory, developmental stage of personal and cultural identity development at the individual level as well as multicultural sensitivity in combination with the influence of interpersonal and institutional power dynamics emerged as significant factors impacting effectiveness of intercultural communication. These factors will be explored and suggested strategies for facilitating intercultural communication on intrapersonal, interpersonal, and institutional levels, will be provided.

Keywords: intercultural communication, multicultural sensitivity, cultural identity

Basic assumptions about man and organizations: An empirical examination of the construct and its validation among Indian managers

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The purpose of the paper is to present two studies dealing with basic assumptions of Man, Work, and Organizations by analyzing their factor structure and demographic characteristics and comparing its validation with other measures. Two studies are presented. In Study One, 177 managers from Indian firms responded to a questionnaire of 54 items on a five-point scale dealing with nine dimensions of optimistic/pessimistic basic assumptions about Man, Work, and Organizations. Study Two presents an analysis of data from 98 owner managers who responded to the 54 item questionnaire on a five-point scale and other measures of self-efficacy and strategic orientation. Exploratory factor analysis performed on Study One data considering nine dimensions - (a) Adaptability versus Non-adaptability, (b) Role-Making versus Role-Taking, (c) System Responsibility versus System Vulnerability, (d) Resourcefulness versus Resourcelessness, (e) Internal versus External Locus of Control, (f) Employee Optimism versus Employee Pessimism, (g) Collaborating versus Competing, (h) Activism versus Passivism, and (i) Evolutionary versus Interventionist change - of optimistic/pessimistic assumptions of Man, Work, and Organizations. A four factor solution explained 71.5% of variance. These factors were labeled as (1) Agenticity, (2) Catholocity, (3) Holisticity, (4) Organicity. Differences in demographic factors like age, gender, rank, industry type, and ownership were also analyzed. Study Two analyzed correlations in the total scores on basic assumptions of managers in relation to their scores on self-efficacy measures and strategic orientation measures of owner-managers. The data showed high correlations between the basic assumptions scale and self-efficacy, and basic assumptions and the strategic orientation scale suggesting strong validity of the measure. The optimistic/pessimistic basic assumptions of managers are a strong determinant of managerial effectiveness and may be considered as a variable differentiating

across developing and developed countries which differentiates optimism and pessimism in their assumptions about Man, Work, and Organizations.

Keywords: *organisational management, optimism, self-efficacy, strategic orientation*

Beginning is the common factor: A new direction for psychotherapy research

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Psychotherapy research has been dominated by model and method wars, the search for common factors, and more recently by the issue regarding effectiveness versus efficacy. Most of this research has aimed to remove the processes of recruitment and induction from research programs as confounding factors. It is asserted that the only truly common factor is the beginning, and before any conclusion can be drawn about the relative merits of models and methods and efficacy there needs to be detailed study of the processes of beginning. A study of beginning at child and adolescent mental health services is reported. The study used qualitative data from service users retrospectively and prospectively, and interviews with professionals, especially designated Intake Workers. Sixteen parents, seven Intake Workers, and fourteen other professionals (clinicians and agency leaders) were interviewed. In the prospective study six parents were interviewed four times. A total of 55 interviews occurred. The study revealed a range of issues about beginning and its importance for service users. The range of tasks involved in telephone referral were listed and mapped chronologically. It was demonstrated that the initial telephone contact shaped the internal structure of an agency and the means of interaction with external professionals. Finally, a careful analysis of the drop out literature showed a pattern among referring families associated with the decision to pursue contact with the an agency. As a qualitative pilot study of beginnings in therapy, many issues worthy of further research were revealed. It is clear that all therapy begins. But, why haven't therapy beginnings been systematically researched? Three reasons are provided: therapy is constructed as the action of

therapists, outcome is considered the key criterion of the value of therapy, and differences in models must count for something. Most therapy research is conducted by, or on behalf of, therapists. A new research direction is required. Examining beginnings will change the way therapy is construed.

Keywords: *therapy, common therapeutic factors, therapy drop out*

Behavioural patterns of mother-child interactions: Influence on deaf children's language development

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Mother-child interactions were analysed with the main purpose of understanding the basic behavioural patterns of hearing mothers and deaf children and their effect on language development. Dyads were divided as follows: 1) Hearing Mother-Hearing Child; 2) Hearing Mother-Deaf Child; and, 3) Deaf Mother-Deaf Child. Each dyad was asked to perform three different tasks (30 minutes each task): a) playing free game by using an artificial fishing game; b) arming a puzzle with different colours, placing and naming each token correctly, and, c) creating a full story about a simple drawing representing four people. Dyads were filmed while playing at the laboratory and recordings were analyzed using the observational multidimensional system of Ribes & Quintana (2002) in order to obtain behavioural patterns. Results show that Dyad Two had more problems performing the tasks as asked and this dyad showed the highest numbers of behavioural patterns non-related with the tasks in comparison with the other dyads. Hearing mothers with deaf-children should: a) use more visual and manual procedures of behavioural patterns in order to contribute to enhance language development on their children and b) increase the opportunities of significant exchange with the child to promote the use of linguistic symbols in problem solving.

Keywords: *child psychology, developmental language psychology, deafness, mother-child dyads, language development*

Being a woman and being a manager: Gender management at work

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Whilst many reforms have taken place in the work setting to enable an increase in participation of women in the workforce, there has been little to no impact on their participation in the upper echelons of organisations, in managerial and decision making roles. The aim of this study was to explore female managers' psychological responses to the barriers they currently face in male dominated work environments. In particular this study explored the process of women's identity creation in light of their symbolic outsider status in organisational life. Semi-structured interviews were conducted with fourteen female managers aged between 39 to 50 years of age ($M = 42.7$ years) from six Australian corporate organisations. They each held executive level positions within typically male dominated organisations. All participants were recruited from Victoria and New South Wales. Transcripts were analysed using an illustrative approach. Results indicated that most organisations in this study had explicit and visible policies to increase the number of women at all levels. Some had been recipients of EOWA Women's Employer of Choice awards. However, what emerged through this research was the salience of gendered institutionalised practices which are inherently biased against women and femininities. Women described the gendered aspects of their organisational cultures that required them to adapt their leadership behavioral repertoires to those that better fit a perceived image of female prototypical leadership. This study illustrated the centrality of gender as a "managed status" in the workplace (a process of changing self to achieve acceptance, and strategically combat resistance to them as women). All the women coped by deliberately renegotiated their gender identity to conform to organisational expectations of femininity. Individual coping strategies may have only a limited value in the long term Women's adaptation strategies ultimately reinforce the masculine value system resulting in short term, individual success, and long term failure for long awaited cultural change in organisations. While

"gender management" is important, this does not prompt organisational change in relation to attitudes towards female managers. Therefore a better understanding of the organisational culture features that sustain gender bias is a critical step for progressing the position of women.

Keywords: *career progression, gender discrimination, gender identity, organisational culture, gender management*

Best lessons for well-being from psychologists: Implications for public and professional practice

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The decades old view that Psychology has much to "give away" is still apt in terms of the discipline's expanding knowledge base and practical relevance. This qualitative investigation explored the key precepts that psychologists viewed as most beneficial for promoting personal well-being. Individual interviews were conducted with a sample of 30 Australian psychologists (18 female, 12 male) representing diversity in terms of age, background, experience, employment and disciplinary interests. The semi-structured interviews were used to explore ideas about psychological well-being that were dominant in the way participants thought about and practiced psychology. Thematic analyses further refined and articulated these lessons and related themes. The identified lessons were tagged using the phraseology of participants (e.g., *accept oneself and have empathy for others, seek to reduce distress rather than find a cure, relationships will not take care of themselves, move in the direction of your core values, focus on good things in life*). In this oral presentation, the propositions that participants viewed as most helpful for personal growth are introduced and common themes considered. Although concern about the prescriptive nature of "best lessons" was raised by some participants, it was clear that guiding principles of human well-being served as fundamental heuristics. The qualitative methodology revealed how these psychological

“best lessons” were a personalised distillation of experience, training, and professional activity. The lessons have implications for public education and for promoting well-being. The results are also important for what they imply about professional practice. Although formal evidence-based interventions underpin the dominant health framework, the findings suggest ways that psychological expertise is personalised, aggregated and transmitted.

Keywords: transmission of psychological expertise, well-being, psychology professional practice, psychology profession knowledge, psychological expertise

Body image experiences of Australian women

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How do middle aged and older women perceive their bodies in an era when youthful looks are important? In this study a self-report questionnaire was used to explore the thoughts, feelings, behaviours, memories and experiences that the participants associated with their bodies. The questionnaire yielded qualitative data from 68 participants, Australian women aged 40 to 92 years. The themes that emerged were explored and related to holistic models of wellness including the Model of Women’s Body Image Resilience of Choate (2005). Most frequently occurring themes across all age groups were: satisfaction with body and quality of life; coming to terms with major life stressors that affected body image; body dissatisfaction; considering the inner self as more important; thoughts and beliefs influencing lives; positive ageing experiences. Spirituality was also an important theme for all age groups, mentioned 52.9% of the time by the seventy years and over age group. These themes and less often reported themes such as family of origin support and self worth are reminiscent of the life tasks of the holistic model of wellness of Myers, Sweeney and Witmer (2000) and of protective factors in Choate’s resilience model. Many themes align with Ryff’s (1991) theory that “...with age, individuals achieve a closer fit between an ideal and their actual self-perceptions” (p. 286).

Keywords: body image, females, ageing, resilience, well-being

Boosting school girls into science – too late for an effective aid?

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A national day of action to promote scientific and technical careers for women is held every year since 2001 in Germany. On this so called “girls’ day” female students between the ages of 10 and 15 get the opportunity to spend one day within a company. In general this day should increase the pool of applications for this kind of job as well as to encourage women for scientific professions. But does this activity works? The efficacy was evaluated based on theories about formation of occupation choice as well as the theory of planned behavior. Forty-five schools within a defined area were asked to hand over study material consisting information about the aim of the study, concerns about privacy protection as well as information for parents and the web address to their female students. Participants as well as non-participants aged 10 to 15 were asked about their attitudes about science as well as scientific careers within two weeks before and two weeks after the “Girls day” in April 2007. Demographic data as well as parental background, academic self image as well as gender roles were surveyed. The questionnaires were presented using an internet based tool. One hundred and eighty two girls answered at least the first part of the survey before the Girls day took place. Dropout rate from the first to the second measurement point is nearly 50%. Based on the indicated motivation to take part or not, three groups were compared regarding sex roles, attitude about women and science as well as interest in sciences and career aspiration. Intrinsic motivated girls showed a less stereotyped gender role image, a more positive attitude regarding women and science and expressed more often the intention to start scientific/ technical training after school. Based on the theory of planned behavior, effectiveness of this intervention was evaluated. Attitude to start a scientific/ technical career as well as self efficacy did not change for the participants. Data support the idea of the circumscription-and-compromise theory of Gottfredson, that gender

role and self concept and occupational preferences develop at the same time at a very early stage of child development. For that reason these days of action are quite helpful for these girls, who do not show that gender typical attitude and behavior. To change stereotypes and attitudes toward science and to foster girls into scientific professions this intervention seems not that effective. The limited number of participants should be taken into account in interpreting the results.

Keywords: *technical careers, women's careers, occupational preferences, gender roles, self concept*

Broken promises in organizations: Does severity matter?

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Examples of broken promises in daily life abound, but relatively little research directly investigates these behaviors. The present research aimed at examining the classification of broken promises and the potential interactions of four severity components (probability of detection, probability of forgiveness, penalty severity, morality severity) in predicting these behaviors, especially broken promises in organizations. In Study One ($n = 103$), we first defined "broken promise" and used an open questionnaire to gather examples of broken promises that are common in daily life. In Study Two, we used exploratory and confirmatory factor analysis to investigate the categorization of these behaviors ($n = 520$). Finally, based on Elangovan & Shapiro's (1998) trust betrayal model in organizations, we examined the relationships between the four severity components with the frequency of broken promise (Study Three, $n = 126$). We obtained 40 items of common broken promises through open questionnaires and the results of exploratory and confirmatory factor analysis showed that these behaviors could be classified into nine relationships (accounting for 69.39% of the total variance), including broken promises to service organizations, work units and banking organizations. We then found that: (1) the probability of detection interacted with penalty severity to predict the frequency of broken

promises to service organizations; and (2) the probability of forgiveness interacted with morality severity to predict the frequency of broken promises to work units. Overall, this study contributes to a better understanding of broken promises in organizations. These results also highlight the interactive effects of four severity components on broken promises, especially the broken promises to service organizations and work units. Our findings may have important implications for employers and employees, suggesting that we can reduce broken promises by controlling these four severity components.

Keywords: *broken promises, trust betrayal model, penalty severity, organizational promises*

Bullying and peer victimisation in adolescent girls with attention-deficit hyperactivity disorder

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Although there is an abundance of research documenting social impairment in boys with Attention Deficit Hyperactivity Disorder (ADHD), much less is known about the social experiences of adolescent girls with ADHD. This aimed to investigate in a sample of adolescent girls with and without ADHD (1) overt (i.e. physical, such as hitting or kicking) and relational (i.e. social manipulation, such as social exclusion) bullying and peer victimisation; and (2) the contribution of Social Information Processing (SIP) theories (specifically hostile attribution bias and response selection) in explaining bullying and peer victimisation in adolescent females with ADHD. Adolescent girls with ADHD (Mean age = 15.1; $SD = 2.0$) were recruited from the Royal Children's Hospital, Melbourne, Australia and the community ($n = 22$). Control participants (mean age = 15.1; $SD = 2.0$) were recruited from the community ($n = 22$). Adolescent girls and their primary caregiver completed measures assessing social impairment, overt and relational peer victimisation and bullying behaviour, and SIP. Despite no group differences in socio-economic status, family composition, parental mental health, and full scale IQ, girls with ADHD

had more self- and parent-reported social problems than girls without ADHD. There was no evidence that girls with ADHD engaged in more overt and relational bullying than controls, however, they were more likely to be both overtly and relationally victimised by their peers (by both parent- and self-report). Comorbid oppositional defiant disorder (ODD) and conduct disorder (CD) appeared to exacerbate social problems for girls with ADHD, and in many instances accounted for differences between girls with ADHD and controls. There was no evidence that girls with ADHD are at particular risk of SIP deficits compared with controls. This study provides additional evidence that girls with ADHD experience significant social impairment in comparison to their peers. Of greatest concern, they are more likely to be overtly and relationally victimised by their peers. Comorbid ODD and CD symptoms should be targeted in treatment, as these comorbidities account for most of the social difficulties experienced by girls with ADHD.

Keywords: attention deficit hyperactivity disorder, conduct disorder, social information processing, adolescents, social impairment

Burnout among French operators: A contextual approach in testing the job-demand-control-support model

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The job-demand-control-support (DCS) model (Karasek & Theorell, 1990) is a leading theoretical model in occupational health psychology because it provides a clear conceptual framework and a standardized measurement tool, the *Job Content Questionnaire* (Karasek, 1985). However, most studies on representative samples of employees that measured perceived job stress with the Job Content Questionnaire have failed to confirm the predictions of the model. In line with recent critics arguing for context specificity in occupational stress research and with the notion to develop more specific measures for specific occupational groups, the aim of the present study was to examine how the DCS model applied in a well-defined occupational group assessed with a specific occupational stress

measure. Assembly-line operators ($N = 146$) working in the same agricultural machine plant participated in the study. The context-specific occupational stress measure was developed based on semi-structured interviews with 20 participants who identified the specific sources of job demands, control, and support experienced by the operators. All participants then completed the scale established, along with a measure of burnout (MBI-GS) and of demographic characteristics. Factorial analyses revealed 3 latent factors: job demands, organizational climate (i.e., control + supervisor support), and support from colleagues. Hierarchical regression analyses indicated that job demands, control and support predicted significant proportions of burnout, in particular emotional exhaustion and cynicism. We also observed a moderator effect of social support and a three way interaction. These results support the value of augmenting the components of the Demand Control Support model with stressors that are situation-specific.

Keywords: occupational stress, burnout, job demands, job content questionnaire, job demands-control-support model

Burnout and compassion fatigue among emergency staff: The influence of demands, control, support and emotional labor

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According to the Job-Demand-Control-Support (JDCS) model, the most adverse job-related strain reactions are to be expected in work environments characterized by high demands, low control, and low support. There is now evidence that these factors cause strain, and that their effect is cumulative. However, dealing with injured or distressed people requires that emergency staff to regulate their expression of emotion what has been called "emotional labor". However, the expression of appropriate emotions, or the suppression of felt emotions, may be at odds with actual experienced emotions. Surface acting refers to the display of emotion regarded as appropriate but not actually felt. Deep acting refers to strategies aimed at actually feeling an emotion considered

to be required. Both strategies require constant effort and may result in strain in particular, burnout. In addition to burnout, emergency staff faced repeatedly with traumatic accidents may experience compassion fatigue. Regression analyses showed a main effect of demands and support on emotional exhaustion and depersonalization, the core dimensions of burnout and on compassion fatigue. No main effect of control nor an interaction was observed. Surface acting had a main effect on the burnout dimensions, but not on compassion fatigue. On the other hand, deep acting had no effect on burnout but a positive effect on compassion fatigue.

Keywords: burnout, emotion regulation, medical emergency staff, emotional labour, compassion fatigue

Burnout in a Scandinavian police force in times of economic turmoil: A study of its precursors and possible gender differences

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The police occupation has been identified as a high risk occupation, particularly vulnerable to burnout (e.g. Goodman, 1990). Studies generally show conflicting results on gender differences in relation to burnout and stress, with some authors suggesting that women are less likely to be exposed to operational stressors (Brown and Fielding, 1993; Brown et al., 1999), but that women report higher levels of burnout (Schaufeli and Enzmann, 1998). Later studies however have failed to replicate these results (Burke, Richardsen, & Martinussen, 2006; Kop et al., 1999). Studies on bullying in the police also yield conflicting results. In Hoel and Coopers' analysis (2000), women were on average bullied more often than men but differences proved non-significant, contradicting other scholars that have found significant gender differences (e.g. Brown & Fielding, 1993; Burke & Mikkelsen, 2005; Kop et al., 1999). This study focused on examining the effects of police stress and client bullying on burnout and organisational commitment, and the possible gender differences on these variables. It was

hypothesised that police stress and client bullying would predict higher burnout scores (Hypothesis 1a) and lower organisational commitment (Hypothesis 1b). It was further predicted that females would measure higher on burnout than males (Hypothesis 2a) and display lower organisational commitment (Hypothesis 2b). A questionnaire was sent out to employees of a Scandinavian police force ($N = 667$). A total of 346 questionnaires were returned (response rate 52%). Stress was measured by the Operational Police Stress Questionnaire (PSQ-Op) and Organisational Police Stress Questionnaire (PSQ-Org). An adapted version of the Negative Acts Questionnaire (NAQ-R) was used to measure perceived exposure to bullying and victimisation *on behalf of clients at work*. Burnout was measured using the Copenhagen Burnout Inventory (CBI), while commitment was measured using the Organisational Commitment Questionnaire (OCQ). All measures were translated from English to the Scandinavian language using back-translation. Data was analysed using multiple hierarchical regression. Hypothesis 1a and 1b were partly supported, where police stress predicted burnout and organisational commitment. Research results did not lend support to Hypothesis 2a and 2b. A review of practical implications for the Icelandic police is provided.

Keywords: burnout, stress, bullying, gender differences, organisational commitment

Can jurors evaluate evidence of criminal cases without bias?

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The hypothesis that the label "offender" gives a negative influence on items related to the offender implicitly was tested. To verify this hypothesis, we applied the Implicit Association Test (IAT). IAT measures are designed to assess automatic associations between a contrasted pair of target and attribute, through a discriminatory task that requires fast responses. Eight undergraduate students participated in our experiment. In the IAT, we measured their response time to two types of items (i.e. Type A or B) and two types of adjectives (i.e. positive or negative meanings). Each type of item had three

articles of clothing (e.g. a white jacket) and each type of adjective had three words (e.g. clean). Participants were asked to respond to an item or adjective on the computer screen as quickly as possible, according to the rule which paired a type of clothing with a type of adjective, the other clothing type with the other adjective type. For each participant, we conducted two sets of IAT, and in the interval, participants were shown slides of a murder. In the slides, the offender put on Type A items, and the ambulance worker put on Type B. The results showed that the average response time, when type A items are paired with negative adjectives and type B items with positive adjectives, became faster significantly after showing the slides ($p = .02$). This indicated that the slides changed the implicit evaluation of Type A items negatively (while they changed that of Type B items positively). Our experiment confirms the hypothesis that the label "offender" gives the negative influence on items related to the offender implicitly. In the criminal court, jurors are asked to evaluate evidence reasonably, or in an evenhanded fashion. However, our study suggests that evidence may be evaluated with negative bias if they are presented as "related to the offender". Moreover, it may be impossible to be unbiased, because it is due to unawareness.

Keywords: *offender labelling, implicit association test, criminal court, offenders, jurors*

Can victim-police interactions be therapeutic for victims of violent crime?

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The aim of this research was to investigate the impact of victim-police interactions on psychological well-being of victims of violent crime. Twenty-eight participants were recruited by advertising the study at community health centres and police stations in Melbourne. In depth, face-to-face interviews were conducted with the participants who were victims of sexual assault, physical violence, threats to kill, child abuse, domestic violence, and relatives of homicide victims. Both quantitative and qualitative measures of participants' perceptions

of procedural justice (fair treatment by police) and the impact of the interaction on participants' well-being were administered. Perceptions of procedural justice in victim-police interactions were a strong predictor of participants' well-being as a result of the interaction with police. As a result of the interaction with police, victims who reported a long-standing crime (sexual assault, child abuse) were able to get closure and their depression associated with the crime was reduced. In conclusion, the way police relate to victims of crime has a powerful impact on victims' psychological well-being. Reporting a violent crime to the police is essential for a long-term recovery from the negative psychological consequences of the crime.

Keywords: *victims of crime, procedural justice, victim-police interactions, recovery, victims' well-being*

Caregiver causal attributions in youth early psychosis

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Research has examined relatives' beliefs about the causes of psychosis and has found that caregiver causal attributions about the etiology of psychosis have a significant impact on behavioural and emotional outcomes for both patient and family. The aim in the current study was to investigate caregiver causal attributions about illness onset in youth early psychosis and the factors that influence these attributions. Caregivers and patients were recruited from a youth early psychosis service located at a rural and urban setting near Melbourne, Australia. Fifty one caregiver/patient dyads participated in the study. Caregivers were administered the Causal Models Questionnaire for Schizophrenia. Caregiver demographics and patient levels of substance use were also collected. Caregivers endorsed a range of causes across causal attribution categories. Caregivers most frequently endorsed environmental causes, followed by psychological causes, interpersonal causes and biological causes. Caregivers predominantly endorsed the individual causal attributions of hereditary/genetics and illicit drug use. There was evidence that caregiver and

patient factors were related to the types of causal attributions made about the onset of psychosis. This study has provided insights into caregiver attribution processes, where caregivers are developing causal attributions that are biopsychosocial in nature and are generally consistent with current etiological theories in youth mental health services. Of concern is the increasing perception by caregivers that substance use is a cause of psychosis. Implications for psycho-education and caregiver intervention approaches in early psychosis services will be discussed.

Keywords: psychosis, caregiver causal attributions, caregiver interventions, caregiver psychoeducation, causal models questionnaire for schizophrenia

Changes to the Pathway One training option for psychologists: A proactive response in Queensland Health

DEMPSEY, S. (Queensland Health), MORRELL, S. (Queensland Health)

The education of psychologists is currently undergoing radical change particularly with regard to the Pathway 1 option which provides a competency based supervised practice program for probationary psychologists. Specifically, the previously employed "4 plus 2" model is proposed to be replaced with a "5 plus 1" model requiring prospective psychologists to complete 5 years of university training followed by one year of supervised practice to attain general registration. The aim of this presentation is to describe an innovative project undertaken by Queensland Health to support registration board standards and radically improve the delivery and outcomes of this pathway to registration. Under the current 4 plus 2 arrangements, Queensland Health has recently appointed a project officer to design, implement and review the state wide training and assessment of Pathway 1 psychologists. In addition to this, 16 Clinical Educators have been appointed throughout the state and will be available to implement the recommendations of the project officer and oversee the education and professional development of Pathway 1 psychologists. A qualitative approach employing thematic analysis (Braun & Clarke, 2006) will be used to describe this process. Key elements which will be

addressed in this presentation include the development of a curriculum framework, resource materials, supervisor and supervisee manuals, and an annual program of workshops delivered through the Allied Health Clinical Education and Training Unit (AHCETU). The introduction of a detailed curriculum framework with an accompanying set of assessment procedures will provide a significant step towards standardisation of a competency based supervised practice program in Queensland Health. Supervisors of probationary registrants employing the Pathway 1 route to registration will benefit from the development of a standardised curriculum and set of assessment procedures. In addition to this a set of recommendations will be provided for the ongoing education of Pathway 1 psychologists.

Keywords: psychology education, psychology registration standards, pathway one psychologists, standardised psychology training, four plus two training pathway

Characteristics associated with days of attendance and treatment compliance among clients in substance abuse treatment

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The purpose of this study was to examine individual characteristics associated with days in treatment and treatment compliance among clients who entered a community-based treatment program for substance abuse. We expected that being female, presence of children in the home, and lack of a serious mental illness, would predict more days of treatment attendance and greater likelihood of treatment compliance. We examined primary substance of abuse as a predictor of days of attendance and treatment compliance; however, no specific hypothesis was made regarding drug of abuse and the outcome variables. Information was retrieved from medical records of male and female clients ($N = 230$) who took part in a community-based treatment program for substance abuse in a large city in the southeastern United States of America during a

32-month period. Primary substance of abuse at treatment admission was coded: 0) alcohol, 1) cocaine/crack, or 2) other drug. Treatment compliance was coded as 1) complete or partial treatment success, or 2) non-compliance/program discharge. Treatment compliance was determined by the treatment staff. The multiple regression with days of treatment as the dependent variable was significant, $F(4, 225) = 2.73, p < .03$. However, the only significant predictor of days of treatment attendance was gender; being female predicted longer treatment attendance ($\beta = -.21, \text{s.e.} = .04$). Results of the overall logistic regression with treatment compliance as the dependent variable was not significant, $\chi^2(5) = 8.84, p = .116$. Although the combination of predictors did not account for a significant portion of variance in treatment compliance scores, being female was associated with greater likelihood of treatment compliance, Wald statistic, $\chi^2(1) = 5.17, p < .05$, Odds Ratio = .32, Confidence Interval = .12 to .86. Results support previous studies that demonstrate that women may be more responsive to outpatient treatment for substance abuse (e.g. Sanchez-Craig, Leigh, Spivak, & Lei, 1989).

Keywords: treatment compliance, substance abuse, gender differences, community based substance abuse treatment program, mental illness

Characteristics of item wording effect in psychological tests and reasons it is produced

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The aim of this study was to explore the characteristics of the Item Wording Effect in psychological tests and how this kind of effect is produced. Three hundred and forty students in high school and college were tested in this study, 268 male and 72 female and 175 in high school and 165 in college. The measure of the Chinese version of Anxiety Control Questionnaire (ACQ) was used which contains 30 items, 12 items which are positively worded and 18 items negatively worded. The questionnaire is aimed at testing the feeling people have to control the

anxiety. And the structure of the whole questionnaire includes one substantive factor of anxiety control and two method factors of positive wording and negative wording. The method of data collecting used four versions of ACQ which were constructed through reversing the expression of each item, meaning that items that were originally positively worded were negatively worded after reversing and the ones originally negatively worded became positively expressed. The four versions were: all-positively-worded items, all-negatively-worded items, original version and the reversal of the original version. Firstly, the results of Confirmatory Factor Analysis of the four versions of ACQ indicated that both the original version and the reversal of the original version contained factors of item wording direction. However, versions with only one direction did not contain these kinds of factors. Secondly, comparisons of the total score of the four versions showed that there were significant differences between the original version and the version of all-positive-wording items as well as the reversal version. However there is no significant difference between the original version and the all-negatively-wording-item version. Thirdly, analysis of the difference of the total score of the four versions shows that the difference was caused by the negatively worded items in the original questionnaire. In conclusion, questionnaires with positively and negatively worded items will produce item wording factors if parts of the items are scored reversely. Questionnaires with items worded in one direction will not result in such kind of wording factors. The production of the item wording effect is directly related to the reversal of item scores.

Keywords: item wording effect, psychological testing, questionnaire item reversal, wording direction, anxiety control questionnaire

Childhood-adolescent caretaking experience and non-suicidal self-injury

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Non-suicidal self-injury (deliberate self-harm) including self-mutilation, is a major health risk for contemporary adolescents and young adults

(Gratz & Chapman, 2007; Gratz et al., 2002; Klonsky & Olino, 2008; Skegg, 2005). The current study aimed to examine the relationship between childhood-adolescent attachment and specific caretaking experiences, and non-suicidal self-injury (Fanous, Prescott & Kendler, 2004; Gratz, 2003; Marchetto, 2006). Based upon findings from literature on non-suicidal self-injury, it was hypothesised that perceived: insecure maternal attachment; childhood abuse including neglect, physical and sexual abuse; low maternal care; and high maternal overprotection in childhood and adolescence, would all be related to frequency of non-suicidal self-injury. One hundred and seventy one volunteer undergraduate students from a Metropolitan Melbourne university completed an anonymous questionnaire which asked about their childhood caretaking experiences, attachment and adult self-harming behaviour. Of these, a surprising one hundred participants (58%) reported self-harming at least once in their lives using a variety of methods. The most prevalent methods included body-cutting and severe scratching of the skin. The current paper articulates the specific patterns and correlates that emerge from the self-harming data of these young people. Moderate significant relationships between childhood-adolescent neglect, insecure maternal attachment, sexual abuse, and frequency of non-suicidal self-injury were found. A regression analysis also demonstrated that childhood-adolescent maternal attachment and maltreatment problems, especially a neglectful and negative home environment, predicted frequency of non-suicidal self-injury (Gratz et al, 2002; Gratz & Chapman, 2007; van der Kolk & Fisler, 1994). These results support previous reports in the literature relating childhood adversity to non suicidal self-injury in other populations. It was concluded that results from the current study show that certain social-environmental adversities in childhood-adolescence are associated with a significant part of the non-suicidal self-injury picture, and may need to be an important focus of treatment for people who deliberately harm themselves.

Keywords: *self-injury, deliberate self-harm, childhood-adolescent maternal attachment, childhood adversity, caretaking experiences*

Children's spatial analysis of simple and complex hierarchical patterns in a drawing and a similarity judgement task

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The aim of this study was to investigate the development of simple and complex hierarchical patterns in children with regard to the spatial analysis ability. A drawing task and a forced-choice similarity judgement task with two simple and two complex hierarchical patterns were employed in this study. In these tasks, children were exposed to each pattern for short (300 millisecond) and long (3 second) durations. One hundred and twenty one children aged between 4 and 9 years of age participated in the drawing experiment and 100 children between 4 and 10 years of age participated in the similarity judgement experiment. The drawing task showed that the correct integrated responses increased significantly with age $F(5, 115) = 8.4, p < .01$. In the similarity judgment task, the choice for global responses increased significantly with age, $F(4, 95) = 9.6, p < .01$. A slight increase in the occurrence of these responses was observed until 8 years of age, followed by a decrease between 8 and 10 years of age, as attested by the significant quadratic trend $F(1, 95) = 6.9, p = .01$. Congruently the *local partial responses* decreased between 4 and 8 years of age and then increased between 8 and 10 years of age, as attested by a significant quadratic trend $F(1, 95) = 14.3, p < .01$. Results in the drawing task showed that the correct integrated responses increased progressively with age. The similarity judgment task demonstrated global preference in 4 year-old children. This preference gained in strength in the later ages, but decreased at 10 years of age, particularly when children were exposed to complex stimuli. Between 8 and 10 years of age, children found more similarities between the targets and partial patterns that preserved local information than complete patterns that preserved the global shape but not the local information. These developmental trends were sensitive to contextual factors such as the duration of exposure, underlying the importance of attentional processes in the way children analyzed hierarchical patterns.

Keywords: *simple and complex hierarchical patterns, children's spatial analysis ability, similarity judgment task, attention, drawing task*

Children's psychological problems in United Arab Emirates public schools: A comparison of the perspectives of various school staff

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This study aimed at comparing how differently school staff members (teachers, administrators, and vocational staff; i.e., social specialists and psychological specialists) perceive the prevalence and seriousness of various children's problems. Moreover, this research shall investigate the impact of using different measurement types. A survey outlining various psychological problems (behavioral, emotional, and mental) was constructed and administered. A multitrait-multimethod approach was used to identify children's problems. The survey included three methods: firstly, school staff were asked to rank-order problems according to prevalence and seriousness respectively; secondly, school staff were asked to compare paired categories of students' problems; thirdly, school staff were asked identify how prevalent is each of the 61 problems that were selected from various measures and scales. When participants were asked to list children's problems in order with regard to frequency and seriousness, lack of motivation and low academic achievement were at the top of the lists. Comparing frequencies and seriousness of paired problems indicated that the most frequent and serious problems are behavioral, while the least frequent and serious are physical. When participants were asked to rate how spread each of the 61 problems identified in the survey were, more than half of the problems were rated between moderately-spread and very spread. This indicates that school staff members share a perspective that school children have a variety of many problems. Behavioral problems have been rated more frequent than physical problems by all of vocation categories in this study: administrators, vocational staff (Social Specialists,) and teachers. Significantly, teachers did so more than administrators and vocational staff. Social specialists have always rated the frequencies of

problems lesser than teachers and administrators. Lack of motivation and low academic achievement were the two most commonly mentioned problems in terms of frequency and seriousness. Comparing frequencies and seriousness indicated that the most frequent and serious problems are behavioral, while the least frequent and serious are physical.

Keywords: *school staff, children's problems, achievement, motivation, problem perception*

Chinese employees' psychological pressure in the workplace: Proof from industrial products marketing staff, scientific researchers and software engineers

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During about 30 years of China modernization, the economy, technology and society have been increasing or changing very fast. With the change, work and life step is faster and faster. Due to heavy workload, worry about occupation and organization development, facing uncertain surroundings and the future, psychological pressure is an increasingly common feature of modern life and does harm to people. It is an important problem often faced by employees in the workplaces, too. The employees' psychological pressure management is a hot research topic nowadays in China. The purpose of this study was to explore the psychological pressure status, causes and coping strategic. The study used Industrial Products Marketing Staff Psychological Pressure Questionnaire constructed by authors, Pressure Management Indicator Questionnaire (PMI), and Occupational Stressor Indexes-2 (OSI-2), surveyed 256 scientific researchers in five scientific and technical institutions in Beijing, 274 industrial products marketing staff in ten industrial enterprises and company from the whole country, 217 software engineers for small and middle Information Technology businesses in Beijing. The questionnaires were distributed amongst employees at the workplace by investigators or collected data by internet. The results showed that the psychological pressure

level of the total participants in different workplaces is very high and the occupational pressure is the main part. The main stressors of the participants are workload, relationships and organization climate, recognition and career future, role conflict, personal responsibility, home-work balance and daily hassles. The Conclusions were that psychological pressures of Chinese employees are heavier and stressors were from many different directions. The methods of coping with the pressure were personal skills and organization and social support.

Keywords: *modernization, coping, employee stress, social support, pressure management*

Chinese governmental culture: A vital role in the resilience of local governments of heavy disaster regions after 2008 Wenchuan earthquake

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Resilience is commonly portrayed as a positive capability that allows individuals, groups, and organizations to survive and cope with a disaster with minimum impact and damage. This paper aims to assess the influence of Chinese culture in the organizational resilience of local government after Wenchuan earthquake in Sichuan province, China. The semi-structural questionnaire method is applied in this study. The questionnaires are based on the responses of government officers from five heavy disaster regions including Beichuan, Pingwu, Mianzhu, Shifang, and Luojiang. Eighty four officers of different levels from the five counties assisted us to complete the study according to their own working experiences after the earthquake. Four findings are obtained from the research. Firstly, China is a collectivism country which central government can allocate the resources of the whole country more efficiently. Indeed, the supports and helps from other provinces contribute significantly from the descriptions of those officers. Secondly, the Chinese culture appeals to the spirits of high responsibility. All the Chinese citizens, especially government officers, pay more attention to collective benefit compared to personal benefit. Those officers

may perform beyond their capabilities in some circumstances. Thirdly, the collective efficacy of the local government is very high. They believe that the difficulties can be conquered under their efforts and the support from central government. Last but not least, the operational mechanism works well. Various resources, especially the human resources, are sufficient to guarantee the progress of reconstruction. The Chinese governmental culture will ultimately influence the ability of local governments in heavy disaster regions to adapt and respond to the damages caused by the earthquake.

Keywords: *resilience, government, reconstruction*

Chips for challenging: The moderating effects of past attainment and future prospect on the relationship between perceived insider status and offering challenging opinions

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Offering challenging suggestions is important to organizational health. It is, however, less likely for employees to offer challenging suggestions than to offer supporting suggestions. In the United States of America, research on groupthink has demonstrated that group members are willing to go along with a group decision even though they see problems in the group decision. In China, the cultural value of power distance and the emphasis on social harmony suggest that challenging suggestions are less socially acceptable than conformity. Thus, examining situations under which employees are willing to offer challenging suggestions have both theoretical and practical importance. We hypothesize that employees are more willing to offer challenging suggestions if they perceive that they are insiders of an organization (Perceived Insider States, SIS, Stamper and Masterson, 2002) and that they have bargaining chips such as their past attainment in the organization. The identity of an insider puts an employee in a position to contribute and offers some buffer when an employee errs (for example, when voicing challenging suggestions is not accepted). Past

attainment is the additional chips for erring because when employees have attained important accomplishments in an organization, their opinions carry more weight. Future prospect, however, may inhibit an employee from challenging for the fear of disapproval. We hypothesize that employees are most likely to offer challenging suggestions when they perceived themselves to be insiders, have attained much in the organization in the past, but have low future prospects in the organization. We tested our hypothesis using a sample of 91 employees in China from different occupations and companies who attended Master's level classes in a university. Forty-two percent were female. They averaged ten years in their career and five years on their jobs. Their mean age was 32 years. We found a significant three-way interaction between PIS, past attainment and future prospect using hierarchical multiple regression. Results supported our hypothesis. To increase the likelihood that employees would offer challenging suggestions, organizations may consider strengthening the relationship with their employees and considering how to protect the future prospect of employees who voice challenging suggestions.

Keywords: *organisational health, groupthink, group decision making, perceived insider status, employee voice*

Claiming rights or claiming justice: A social psychological analysis of disputes emergence

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The process by which experiences of injustice are perceived, become grievances, and then are transformed into claims and/or disputes is in many respects a social-psychological process. Hence, aims of this field study were 1) to investigate how citizens facing injurious experiences succeed or fail to form a sense of "entitlement" to some kind of redress and assert claims in legal institutions; 2) to explore social-psychological factors that are important in the development of disputing behaviors, but also in the access to rights, law, and justice. A field

study was conducted in free legal aid centres (« Law and Justice Houses » and « Law shops ») in an urban area in France. Methodological procedure combined observations of consultations with legal consultants, semi-directed interviews with the public ($N = 46$), and a questionnaire completed by users of legal aid ($N = 132$). Social representations of the justice system, motives for claiming, and conflict trajectories were assessed. Content and lexicometric analyses for qualitative data, and correlational, factorial and configural analyses for quantitative ones were realized. Emergence and transformation of disputes appeared as conditioned by three main social-psychological factors: social representations, social interactions, and temporality. Shared lay knowledge about justice, interactions with surrounding people or lawyers, and time orientation together participate in the configuration of "naming", "blaming", and "claiming" stages of disputes transformation. Perceived accessibility of legal contexts and trust in legal institutions act as potential barriers in the claiming process. Results highlighted social-psychological anchoring of individuals' commitment to the legal-claiming process, and the dynamic process by which conflicts are transformed – or not – into disputes. It provides new insights for tackling inequalities in access to justice, especially for poor or marginalized populations. Implications for policies and future researches will be discussed.

Keywords: *injustice perception, grievance, disputes, justice*

Classical and modern prejudice towards intellectual disability: Attitudes of undergraduate students at Isfahan University

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The purpose of this study was to investigate the prevalence of two forms of prejudice towards people with intellectual disability (classical and modern) in undergraduate students at Isfahan University. Through cluster sampling, 189 students were selected. The participants filled out a scale of classical and modern prejudice towards intellectual disability, developed by

Nazar Akrami. The data were then analyzed through a one sample t-test, paired t-test and ANOVA test. The results indicated that there were two forms of prejudice in undergraduate students. Students expressed more modern prejudice in contrast with classical prejudice, and having more knowledge about mental disability was related to decreasing classical prejudice. Two forms of prejudice existed in male and female students that studies in different academic disciplines not related to education and psychology of mental disability.

Keywords: prejudice towards people with intellectual disability, classical prejudice, modern prejudice, mental disorders, prejudice amongst students

Client satisfaction and readiness to change in court-mandated substance abuse treatment

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Court-mandated substance abuse treatment has become a viable alternative to incarceration for substance abusing offenders, despite the paucity of research investigating individual's treatment processes. The aim of this study was to investigate whether readiness to change substance abusing behaviour was associated with satisfaction with court-mandated substance abuse treatment. A further aim was to investigate the influence that client age and time spent in court-mandated treatment had on satisfaction with treatment and readiness to change substance abusing behaviour. The Treatment Perceptions Questionnaire (TPQ) and the Readiness to Change Questionnaire (RTCQ) were completed by 35 clients ($M_{\text{age}} = 28.47$, $SD = 6.02$, 25 males) undertaking court-mandated substance abuse treatment. The TPQ measured client satisfaction with the treatment program staff and treatment program structure. The RTCQ assessed client readiness to change substance abusing behaviours, and categorised them as being in either the Precontemplation, Contemplation or Action stage of change based on responses to 12 attitudinal statements pertaining to behaviour change. Results indicated that participants in the Contemplation and Action stages of change reported greater satisfaction with treatment staff and structure

than clients in the Precontemplation stage. Additionally, clients aged 26 years and older were more ready to change substance abusing behaviours and more satisfied with treatment program structure than clients under 26 years of age. Furthermore, clients who had been in treatment for longer than 90 days were more ready to change substance abusing behaviour and more satisfied with the treatment program staff and structure than participants who had been in treatment for less than 90 days. Readiness to change is an indicator of likelihood of change, therefore any means to facilitate client's increased readiness to change should be considered. For example, a brief motivational interviewing intervention employed at the commencement of treatment might influence clients to remain in treatment longer. Younger adults might benefit from a 'transitional' court-mandated treatment program that specifically addresses the unique needs of the young adult population, thus improving their readiness to change, satisfaction with treatment, and ultimately their treatment outcomes. A thorough exploration of mandated treatment issues is included in the body of the paper.

Keywords: rehabilitation, substance abuse, Treatment Perceptions Questionnaire, readiness to change, court-mandated treatment program

Clinically maladjusted and adjusted couples: A preliminary study

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Marital adjustment was originally defined (Spanier & Cole, 1976) as a multidimensional phenomenon which the Dyadic Adjustment Scale (DAS) was reported to measure adequately (Spanier, 1976). The separate dimensions of marital adjustment were reported to be the following: (a) consensus on matters of importance to marital functioning, (b) dyadic satisfaction, (c) dyadic cohesion, and (d) affectional expression. The purpose of this study is to explore if and how the behavior pattern of the woman or of the man is the one influencing dyadic adjustment of marital relationships. Ninety couples (50% males and 50% females) aged 32 to 59 years completed the Dyadic Adjustment Scale (Spanier, 1989). We selected

four groups based on the scores of the two partners, and considered T scores under 30 as indicators of severe maladjustment. There were significant differences between the four groups (t Student). The groups were the following: 1. Non-distressed couples group ($n = 71$); 2. distressed couples group ($n = 8$); 3. mixed couples group: man with clinical profile, normal pattern in woman ($n = 7$); 4. mixed couples group: woman with clinical profile, normal pattern in man ($n = 4$). First, as expected, we found different patterns of behavior for non-distressed and distressed couples. Second, if only the woman has a clinical behavior pattern (low scores on affectional expression, satisfaction and consensus) the man obtained low scores on consensus. If the man has a clinical behavior pattern (low scores on affectional expression and satisfaction), the women obtained low score on satisfaction. The results reveal different patterns of marital interaction, correlating with the behavior of the partners and their gender. These findings are important for clinicians active in family counseling and psychotherapy, as they reveal important information about the influence of the behavior of the partners on couple relationships.

Keywords: marital adjustment, dyadic satisfaction, dyadic cohesion, affectional expression, dyadic adjustment scale

Clinician-guided versus technician-guided internet treatment for depression

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Recent studies indicate that Internet-based Cognitive Behavioural Treatment (ICBT), when guided by a clinician, is as efficacious as face-to-face Cognitive Behavioural Treatment. Emerging evidence indicates that non-clinicians (technicians) can also efficaciously administer ICBT. The question is, would reminders from a technician be as effective as guidance from a clinician? One hundred and forty people with

major depressive disorder were randomly allocated to receive clinician-assisted ICBT for depression, or technician-assisted ICBT (with weekly telephone calls from a technician) or to a waitlist control condition. Participants in the clinician-assisted version received access to a six-lesson program plus regular emails and telephone calls from a clinician, automatic reminder emails, and access to an online discussion forum. Participants in the technician-assisted version received access to the program, automatic reminder emails, and regular email and telephone reminders from a technician. It was expected that the clinician-assisted groups would have higher completion rates and better clinical outcomes than the technician-assisted group. The main outcome measures were the Beck Depression Inventory (BDI-II) and the Patient Health Questionnaire-9 Item (PHQ-9). Completion rates were high, and both treatment groups reduced scores on the BDI-II ($p < 0.001$) and PHQ-9 ($p < 0.001$) compared to the delayed treatment group, but did not differ from each other. Within group effect sizes on the BDI-II were 1.27 and 1.20 for the clinician and technician-assisted groups, respectively, and on the PHQ-9 were 1.32 and 1.60, respectively. Approximately 60 minutes of clinician or technician time was required per participant during the eight-week treatment program. Both clinician and technician-assisted treatment resulted in large effect sizes and clinically significant improvements comparable to those associated with face-to-face treatment, while a delayed treatment control group did not improve. These results provide support for large scale trials to determine the clinical effectiveness and acceptability of technician-assisted ICBT programs for depression. This form of treatment has potential to increase the capacity of existing mental health services.

Keywords: internet-based interventions, cognitive behavioural therapy, treatment, depression

Cognitive functioning following liver transplantation for alcohol-related liver disease: A prospective study

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This study aims to identify the pre- and post-operative neuropsychological and psychosocial functioning of patients who require liver transplantation as a result of alcohol-related liver disease. A comprehensive neuropsychological (WAIS-III, WMS-III, Trails [A&B], Rey-Osterrieth Complex Figure) and psychosocial assessment (Beck Depression Inventory, Psychological Adjustment to Illness Scale) was conducted with 92 patients requiring liver transplantation. Follow-up assessment was conducted with 42 patients, 12 months post successful transplantation. Patients performed significantly below the normative sample on tests of non-verbal cognitive functioning and immediate and delayed memory tasks pre-transplantation. Difficulties with executive functioning, depressive symptomatology and vocational functioning were also identified. With the application of repeated measures MANOVA and Reliability Change Indices, significant improvements were observed from pre- to post-transplantation in non-verbal cognitive functioning, memory, and executive functioning domains, along with significant reductions in depressive symptomatology and vocational difficulty. Additional knowledge of the cognitive and psychosocial sequelae associated with alcohol-related liver disease may assist in the management of patients leading up to transplantation surgery. The cognitive and psychosocial gains and residual difficulties observed post liver transplantation present new and important data to assist planning for optimal recovery and post-operative care.

Keywords: *liver transplantation, alcohol-related liver disease, cognitive functioning*

Collectivist versus individualist culture: Differences in perceptions of health and wellbeing and support factors at work

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This study aimed to examine differences between individualist and collectivist cultures in

perceptions of health and wellbeing and support factors at work. Specifically, the relationship between support factors (peer level, supervisor level and organisational level) and employee health and wellbeing were investigated. Participants included 106 employees recruited utilising a snowballing technique. The majority of participants were under 30 years of age, employed full time with male and female participants equally represented. Health and wellbeing was measured using the short form 8-item Health Survey (SF-8) and Personal Wellbeing Index (PWI) respectively. Perceived organisational support (POS) was measured utilising the POS measure, while supervisor support, job involvement and peer support were measured using subscales from the Work Environment Scale. As predicted, organisational support factors did not predict health or wellbeing in individualist cultures. In contrast, in collectivist cultures, the organisational support factors were found to predict mental health. Also, in collectivist cultures the organisational support factors accounted a significant amount of variance in personal wellbeing. Supervisor support on its own contributed 19.3 per cent of unique variance in personal wellbeing. Furthermore, the organisational support factors (POS, Supervisor Support, co-worker cohesion) together accounted for a significant amount of variance in mental health. Additionally, organisational factors also contributed a significant amount of variance in personal wellbeing. The findings of the current study suggest that the relationship between organisational support factors and health and wellbeing is influenced by cultural differences.

Keywords: *cultural diversity, individualist cultures, collectivist culture, organisational support, wellbeing*

Community collaboration in defining outcomes: Wellbeing among Sudanese in Australia

MURRAY, K. (San Diego State University)

Thousands of refugees enter resettlement countries each year after experiencing persecution and threats to their safety and wellbeing in their homelands. Economic pressures and cultural norms proscribed by the

resettlement country frequently drive the goals for newly arrived refugees and may or may not coincide with refugee goals, beliefs and experiences. The current study explores Sudanese perspectives on positive and negative factors influencing adaptation and hopes and fears for their futures in Australia. The current study recruited 10 adults from Sudan (Mean age = 36.50, $SD = 8.06$) who had been in Australia an average 5.2 years and were purposefully selected to represent a range of ages, life experiences and gender (5 males, 5 females). Participants completed a semi-structured interview in English which lasted approximately 60 minutes. The interviews were transcribed and analysed using a systematic approach (Miles & Huberman, 1994). Participants described their views on positive and negative futures in Australia and people within their community they view as doing well and poorly in resettlement. The participants spoke of the importance of maintaining connections with and providing for one's family and community, both in Australia and Sudan, through obtaining employment and laying a positive foundation for future generations. They highlighted fears for the future as including lack of access to employment, systemic concerns regarding political and racial tensions, loss of Sudanese culture, and negative unforeseen events such as poor health. Participants identified three factors influencing adaptation among Sudanese in Australia including: basic skills such as English abilities; family factors and social losses; and, personal beliefs and attitudes toward life in Australia. The current analyses underscore common themes in human desires for social connections and self-sufficiency underneath a fabric of unique cultural values, beliefs and ways of life among people from a refugee background. Incorporating cultural perspectives in the development and implementation of resettlement and health services and policies has received growing emphasis in some of the Australian service components for good reason. Discussion of study limitations and future efforts which incorporate culturally salient supports and foster cross-cultural dialogue and mutual understanding is provided.

Keywords: *refugees, resettlement, well-being, adaptation*

Community psychology and action research: How the development of a men's health calendar can help to change young men's attitudes towards their health in the United Kingdom

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One of the major issues in health today is the reluctance of men to acknowledge health problems and to find solutions to resolve them. In addition, young men in the United Kingdom (UK) are more likely than any other group to commit suicide, break the law, be unemployed, have no qualifications and have low self esteem. In collaboration with a young men's project in Manchester, UK, in one of the poorest places in the UK, a young men's group was developed to create a men's health calendar. The aims of this project were to identify the most pertinent areas of male health, which the young men identified themselves. A semi-structured programme of activities was devised considering male health issues and young men were invited aged 18 to 25 to participate in the programme. The young men identified and actively participated during sessions around issues related to alcohol, drugs, sex, relationships, exercise, help accessing services, talking more, diet, taking less risks, positive hobbies and self image. A positive informal learning environment was created for the young men to reflect on their own 'health issues'. They developed skills in debate, discussion, photography and simple cooking techniques. Semi-structured interviews and questionnaires were used to explore the health issues they identified and how they might look to change if change was necessary. The questionnaire aimed to find what their attitudes to health issues were and the interviews went deeper to discover possible solutions in changing their attitudes. It was found that there are serious gaps in their knowledge on the importance of health. However, through simple discussion and debate during the activities, it was collectively highlighted what the problems were, and solutions were identified to change attitudes. It can be concluded that community psychology and action research are important and useful approaches in highlighting health issues in young men and seeking solutions to

change their attitudes successfully and potentially for the long term.

Keywords: *male health, young men's group, semi-structured programme of activities, health attitudes, community psychology*

Comparative assessment and remediation of adaptive behaviour skills of some children aged 3-10 years

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The aim of this study was to assess the developmental level of adaptive behavior skills of some children aged 3-10 years, and determine if training can improve the school adaptive behavior skills of those found to be deficient in this area. A cross-sectional method of administering an adapted version of Harrison and Oakland's (2008) adaptive behavior assessment system (ABAS-II), home and school editions, was used. It was administered to 250 children from intact homes, 25 from an orphanage and 25 from a special school for children with special needs, within the age range of 3 to 10 years. An intervention program was mounted for those found to be deficient in the school adaptive behavior skills using the method of "at least prompt adaptive skills". This second phase at the time of submitting this abstract was not yet concluded. The results obtained in the first phase of the study indicated that children from intact homes possessed better over-all adaptive behavior skills than children from the orphanage and the special school. It is expected that the school related adaptive behavior skills of children that are now being given training would significantly improve after the training. The results of the first part of the study reflected the importance of parental involvement in the development of competent adaptive behavior skills of children and the need for caretakers of children, other than parents, to be more involved in the development and training of adaptive behavior skills of children under their care.

Keywords: *assessment, remediation, adaptive behaviour skills, children, developmental level*

Comparative optimism between offenders and legalist drivers: Impact of rehabilitation training courses

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In France, despite recent improvements during the last seven years, 4443 people were killed in a car accident in 2008. Many measures were adopted by the French government to decrease the accidents: raise of police control to detect the presence of alcohol, decreased speed limit etc. Since 1992, the government has introduced driver's licence penalty points: each driver has 12 points and each offence takes away some points. If the driver loses all his points, he has to take the driving test again. One way to recover four points is to go to driver-rehabilitation training courses. These courses stress the risks of driving. (eg. braking distance...) There were two goals of this study. Our first goal was to determine whether traffic regulation offenders have a weaker risk perception than legalist (persons who have not lost any points) ones. Offenders would consider themselves better drivers with better control in driving situations than other drivers. This consideration would cause driving offence behaviors. The second goal consisted in verifying the effects of driver-rehabilitation training courses on risk perception. We made the assumption that the training courses would reduce risk perception and comparative optimism (perception of low risk relative to peers, Radcliffe and Klein, 2002). Three groups ($n = 20$ in each group) were constituted: legalist drivers, offenders before a training course and offenders after a training course. All participants had to fill in a questionnaire measuring comparative optimism in six driving situations (three involved high control from the driver whereas three others involved weaker control). Results revealed 1/ an interaction effect type of driver x control situations; offenders are more optimistic in the probability of having an accident than legalist ones, but only in the high control condition; 2/ the course seems to reduce the optimistic bias of offenders; results seem not to differ from those obtained with legalist ones. Discussion will

focus on implications for driving initiation and continuing education.

Keywords: *driving behaviour, risk perception, driver-rehabilitation training course, traffic accidents, driver control*

Comparison of cognitive and quality of life outcomes in Parkinson's Disease with and without mild cognitive impairment after bilateral subthalamic deep brain stimulation

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Little literature exists about neuropsychological effects of deep brain stimulation (DBS) in Parkinson's disease (PD) with dementia, but patients with dementia are typically not candidates for DBS. Subthalamic (STN) DBS in patients without dementia is generally considered safe from a cognitive standpoint and is associated with quality of life (QOL) gains, but a minority of patients experience cognitive declines. Whether pre-existing mild cognitive impairment (MCI) affects DBS outcome is unknown and is addressed in this preliminary study. Twenty-four patients who underwent simultaneous bilateral subthalamic DBS surgery participated in the study. Patients were assessed about a month before and four months after surgery. MCI was defined independently of outcome measures in each of five domains on the basis of scores 1.5 SDs or more below age-appropriate means (without functional impairment): attention (Digit Span Backward or Spatial Span Backward), language (Boston Naming Test), executive function (Stroop Interference Condition), visuospatial (Visual Organization Test), and memory (Logical Memory delayed). Quality of life was assessed with the Parkinson's Disease Questionnaire (PDQ). Seven patients had pre-operative MCI (six single domain; one multiple domain; all but one non-amnesic). The groups with and without MCI were comparable on key demographic (age, education, handedness, gender) and disease variables (age at onset, disease duration, medication). Motor outcomes assessed with the Unified Parkinson's Disease Rating Scale (UPDRS) were favorable and comparable in the two groups, as were stimulation parameters. QOL

also improved significantly and comparably in the two groups. Cognitive (overall level of cognitive function, attention, executive, verbal fluency, facial discrimination, verbal memory) outcome in the two groups was comparable. However, the MCI group showed greater decline in visual memory. Prevalence of MCI in this surgical sample was comparable to that reported in tertiary care and community samples. This study confirmed positive motor and quality of life outcomes in PD after STN DBS and found that the outcomes are comparable in patients with and without pre-surgical mild cognitive impairment. As a group, patients with MCI before surgery may be at risk of greater visual memory declines after surgery than those without MCI. These declines may not have dramatic functional implications however, as self-rated satisfaction with cognition after surgery was comparable in the two groups. Future studies with larger samples, and defining MCI in a variety of different ways, are needed to confirm the present findings.

Keywords: *deep brain stimulation, Parkinson's disease, dementia, quality of life, mild cognitive impairment*

Complementary and alternative medicine use and distress among Australian women with cancer: A prospective longitudinal investigation

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While several cross-sectional studies have examined the medical, demographic and psychological correlates of Complementary and Alternative Medicine (CAM) use among women with cancer, few prospective longitudinal investigations have been reported. The purpose of the present study is to prospectively examine (i) whether pre-cancer distress is predictive of CAM use at cancer diagnosis, (ii) whether CAM use predicts distress after cancer, and (iii) whether CAM mediates the relationship between pre- and post cancer-related distress. Four waves of data from the Australian Longitudinal Study of Women's Health were analysed. The participants were women who did not have cancer at Survey One, but who

reported developing cancer at subsequent surveys. Women from all age cohorts ('Younger': aged 18 to 23, 'Mid': aged 40 to 45; and 'Older': aged 70 to 75) were included. The measures included CAM usage ('How many times have you consulted an alternative health practitioner in the past 12 months?'); cancer status ('Have you been diagnosed in past 3 years with cancer?'); and distress (Medical Outcomes Study Short-Form 36, SF-36; Centre for Epidemiologic Studies - Depression scale, CES-D; and the Goldberg Anxiety and Depression Scale). Longitudinal analysis of the relationship between CAM use and distress was conducted according to a time-lag model using Linear Mixed Modelling, which models repeated measures, controls for missing data, and establishes causality. The changes in prevalence over time for CAM usage and distress within each age cohort and by cancer type will be discussed. Findings from the prospective predictive and meditational analyses of the (i) combined samples and (ii) separate age cohorts will then be presented. It is anticipated that the findings of this study will provide longitudinal confirmation of the correlations previously observed between distress, CAM and cancer. That is, this study will provide insight as to whether utilising CAM is an effective intervention for managing the distress arising from cancer diagnosis, and whether particular age groups obtain greater benefit.

Keywords: complementary and alternative medicine, cancer-related distress, women's health, global anxiety and depression scale, cancer diagnosis

Completeness of capability revelation and signaling effect: Lessons learned from intellectual property lawsuits

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This study investigates the signaling effect of intellectual property lawsuits as a mechanism of capability revelation. Partly because of the inherent international trade conflict, intellectual property lawsuits are particularly common nowadays. However, the results of the lawsuits are quite interesting, as there are several cases in which the weaker companies from developing

countries were sentenced to win. As a result, they will usually experience a favorable consequence in the market of the host country. In this paper I argue that the lawsuits are important for these emerging multinational firms to reveal their capabilities, as a signaling mechanism to convince the customers in the host country. This study employed a two factors' between-subjects design. The two factors are lawsuit responsiveness (proactively-reluctantly) and the competitiveness of the opponent (strong-weak). As such this yields four cells, and for each cell I assigned 15 subjects. Thus in total there were 60 foreign students who took part in this study. The subjects are postgraduate students in Hangzhou, China and Reading, United Kingdom. The subjects are asked to review the materials presented in an in-basket manner, and then evaluate the capability of the firms from developing countries, and indicate willingness to buy products or services from these firms. The results show that the main effects of the two factors are both significant. Lawsuit response proactiveness and competitiveness of the opponent positively influence capability evaluation and purchasing willingness. In addition, the interaction between the two factors is also significant. With a high level of proactiveness of response, no matter how strong or weak opponents are, the evaluation will be high. While with reluctance of response, the stronger opponents will yield higher capability evaluation and purchasing willingness. The results suggest that the completeness of capability revelation is positively linked with the purchasing willingness, and I argue that signaling effect is the underlying mechanism behind the phenomenon. In conclusion, the customers in the foreign host markets need the comprehensive revelation of companies' capability to build confidence over the products they are buying. Finally, the practical implications are also discussed.

Keywords: intellectual property lawsuits, international trade conflict, competitiveness, product buying, purchasing willingness

Computer-mediated group discussion to achieve consensus

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The study aims to identify the influence of discussion mediums towards aggressiveness and communication satisfaction when discussing different issues. An experiment is conducted to compare three discussion mediums, namely: face to face (FtF), computers mediated communication with real name (CMR), and computer with closed identity (CMA). The discussed matters include social dilemmas and a criminal puzzle. Ninety students from Gadjah Mada University participated in the experiment. They had their discussions in small groups consisting of five participants. To ensure accuracy in data collection, three groups also discuss the same matters with the same medium. Aggressiveness is more evident in the criminal puzzle and the CMA group. The FtF medium became the most satisfying means of communication. Highest domination was reported in discussing social dilemma as well as the CMA medium. The participants in the CMA and CMR groups felt they had better discussions compared to the FtF participants. On the other hand, the FtF participants also felt they had better discussions compared to the CMA or CMR groups. FtF is the best medium to be used in communication. Users believe that the medium they choose is the best.

Keywords: *discussion mediums, aggressiveness, communication satisfaction, social dilemmas, criminal puzzle*

Confirmatory factor analysis of the Chinese version of Motivation and Engagement Scale-University/College (MES-UC)

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During the past twenty years, the concept of students' engagement has received increasing attention in educational psychology. Martin (2005) proposed a use-inspired and integrative motivation and engagement model which has been validated in many domains. But the cross-cultural use has not been explored given that it is an important concern for its generalization. In this study, Martin's Motivation and Engagement Scale-University/College (MES-UC), was adapted and administered to 832 Chinese university students. The cross-cultural validity of the scale was examined based on content analysis,

reliability analyses, Confirmatory Factor Analysis (including two-order CFA and Multiple CFA), and Multiple-Indicator-Multiple-Cause modeling. The results show acceptable reliability of MES-UC in Chinese a university student sample; the construct of MES-UC in the Chinese university student sample is consistent with the one in Martin's study (2005); girls broadly reflect more adaptive levels of motivation and engagement than boys; higher grade-level students reflect less adaptive motivation and engagement than their lower grade-level counterparts; adaptive dimensions of motivation is positively correlated with between-network constructs (academic satisfaction and adjustment); while impeding and maladaptive dimensions is negatively correlated with them. The cross-cultural adaptation version of MES-UC will be applied in further research that will examine the process of engagement in learning among Chinese university students.

Keywords: *motivation, engagement, cross-cultural validity, educational psychology*

Conflict-handling styles

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The purpose of this paper is to examine the relationship between information-processing systems and conflict-handling styles. According to the cognitive-experiential self theory (CEST; Pacini & Epstein, 1999), all behaviour is guided by two information-processing systems: a rational and an experiential system. Although Rahim (1983) and his colleagues conducted extensive research on the five styles of handling interpersonal conflict, no research has examined the connection between the CEST information-processing systems and the five conflict-handling styles. An on-line survey was used by a large sample of undergraduate students ($N = 426$) to examine the relationship between CEST information-processing systems and conflict-handling styles. The survey consisted of a short demographic questionnaire, the Rational-Experiential Inventory-Long Form (REI-L), the Constructive Thinking Inventory (CTI) and Rahim Organizational Conflict Inventory (ROCI-II). Only students who held jobs were invited to complete

the on-line study. The rational system, experiential system and constructive thinking had significant positive relationships with both the integrating and compromising conflict-handling styles. Additionally, the rational system had a positive relationship with the dominating conflict-handling style. The experiential system and constructive thinking had a positive relationship with the obliging conflict-handling style. The rational system and constructive thinking had a negative relationship with the avoiding conflict-handling style. This study is unique in that it was able to show a positive relationship between the CEST information-processing systems and conflict-handling styles with the existing literature supporting the connection between transformational leadership and conflict-handling styles. This provided a good rationale for considering how the CEST information-processing system, conflict-handling styles and transformational leadership could fit together.

Keywords: information processing, conflict-handling styles, cognitive-experiential self theory, transformational leadership, constructive thinking

Constrained innovation: How designers innovate within the boundaries of safety

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Effective design can reduce or eliminate many problems associated with products in use; however, there remain tensions between the risks and experimentation involved in innovation and the risk aversion inherent in regulated, safety critical industries: The cognitive processes involved in innovation are very different from those involved in safety. This paper examines ways in which designers deal with the twin hurdles of innovation and safety in safety critical industries. The data presented is taken from interviews conducted with 20 participants who are stakeholders of the design process of the medical devices industry in the United Kingdom. Participants belonged to one of four distinct stakeholder groups: Designers (11); design academics (two); production managers (one); and regulators (six). Information was obtained through semi-structured interviews. Template analysis generated two distinct themes

explaining how the groups of stakeholders construct the relationship between safety and innovation and how this influences design and innovation in medical device design. Whilst one of the themes was orientated towards creativity; the second was orientated towards facilitating the implementation of those ideas; illustrating that the stage of the process and safety instruction had significant impacts on the social construction of innovation in safety environments. The findings showed that one way to ensure safety in design within such environments is to prioritise safety education and communication over other factors. To the extent that these findings are generalisable to other innovation intensive and safety critical industries, they are relevant to those that make policy in safety critical areas. Communicating safety relevant information to designers needs to take into account how designers construe risk, so that communication can be framed in ways designers will both understand and find credible. The present findings indicate risk communications need to take into account at least two views on reconciling the tensions between innovation and safety. Implications of safety culture in this environment will also be discussed.

Keywords: creativity, safety, innovation, risk taking, experimentation

Construction of a parental support scale

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This research aims to establish a Parental Support Scale under the hypothesized context of relational approach to career theory. Two studies are included. Study One used exploratory factor analysis to construct a Parental Support Scale, and obtain the factor constructs. Participants consisted of 215 college students in Taiwan. Based on the theoretical framework, the author classified five factors containing 33 questions. These five factors were emotional support, esteem support, information support, tangible assistance and social integration. Study Two was utilized confirmatory factor analysis to verify the factor constructs of the Parental Support Scale in Study One. Participants consisted of 435 college students in Taiwan. After the exploratory factor analysis, four factors were extracted: "Emotional Support factor", "Recognition and Respect factor", "Information Provision factor", and "Tangible Assistance factor". And these four extracted factor constructs were consistent with the theoretical

model. Only the Social Integration construct from the original framework was not included. Besides, "Recognition and Respect factor" differed slightly from the original Esteem Support. After the confirmatory factor analysis procedure, the original model which contained second-order latent variables was below the acceptance threshold. Therefore, this model required further modifications. After changing into first-order constructs, and three questions being removed, we got an optimal model in which the chi-square value was lowered to 277.63, the Root Mean Square Error Approximation (RMSEA) reduced to 0.074, the Goodness of Fit Index (GFI) increased to 0.92, and the Standardized Root Mean Square Residual (SRMR) value decreased to 0.05. Furthermore, the factor loading of observable variables all met the level of significance, demonstrating the observable variables were enough to reflect their constructed latent variables. The standardized parameter values were all significant, indicating the latent variables and the observable variables were significantly correlated. The construct reliability of all four latent variables was higher than 0.6, signifying all latent variables had sufficient construct reliability. Based on the reliability analysis in Study One, and the standardized parameter values and evaluation of internal model fit in Study Two, the results showed that observable variables had good reliability and was sufficient to reflect their constructed latent variables. The modified model exhibited high degree of model fit.

Keywords: parental support scale, relational approach to career theory, esteem support, tangible assistance, social integration

Consumer psychology: Moving from reactive to proactive consumer research

PARDO, N. (California Southern University)

The transition from Communism to Capitalism in a few of the FSS (Former Soviet States) has meant a shift in the way consumers view themselves, as well as the way their opinions are measured by the consumer researchers. This presentation will discuss the way consumer research has changed in recent years from a reactive to a proactive approach. Data initially

collected by the advertising firms in some of the FSS could be described as reactive; however, more recent approaches have shifted to a more proactive approach. Instead of how do you like what we have made/what we offer (proving in a post hoc approach that what we have done is good), there are opinion surveys now designed to ask the consumers what products they would like to see, and how they could be improved. Data collected in five countries will be compared on proactive and reactive approaches across several product categories. Consumer data collected using a traditional product approach tends to be more reactive, whereas consumer data collected using more recent methods using a marketing approach (where consumer opinions are used to generate products and improve current products/services) tend to be more proactive in their approach. This shift can be linked to the shift from Communism to post-Communism in the ways consumers perceive their rights and vote with their feet in a more capitalist approach. The shift of consumer opinions is matched by the shift in the field of consumer research, as researchers (primarily psychologists working in the advertising and marketing fields) move from more economic approaches to more modern approaches to researching consumer opinions and attitudes.

Keywords: consumers, reactive approach to consumer research, proactive approach to consumer research, marketing, capitalism

Contribution of the French Society of Sport Psychology to the identification and accreditation of sport consultants

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The paper presents how the French Society of Sport Psychology (SFPS) initiated a procedure of accreditation for consultants in sport psychology to promote an ethical intervention in elite sport. The concerned consultants are either certificated in sport sciences with a specialization in sport psychology, or certificated in psychology (with the title of psychologist) with a specialization in sport sciences. The committee for evaluation consists of 8 members (4 from the managing council of the SFPS and 4 other members of the SFPS). The evaluation rests both on certification, professional experience and

ethical observance. The athletes and coaches encounter more and more difficulties with increasing entitled people who offer them services in mental preparation without any specific education in sport psychology nor ethical limits. To prevent this kind of unwarranted practice and better inform the French sporting area, the French Society of Sport Psychology has undertaken to draw up an informative list of warranted sport consultants and sport psychologists. Today, the procedure is always in progress and more and more consultants submit for an accreditation. This experience sets up an example of the importance of scientific associations to contribute to an ethical practice of sport psychology in elite sport.

Keywords: *sport psychology, French Society of Sport Psychology, accreditation*

Conversion of mild cognitive impairment into dementia: Predictive role of cognitive deficits in executive functioning

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From a historical perspective, clinical research on neuropsychological features of dementia in subjects suffering from mild cognitive impairment (MCI) has focused mainly on declarative memory role. This approach has led to overestimating memory decline rather than the broader cognitive deterioration that afflicts the majority of individuals with MCI. Recently, literature has emphasized the combination of memory disorder and dysexecutive dysfunction (particularly characterized by deficits in selective attention, response inhibition, planning and mental flexibility) as risk factors for the onset of dementia. Within this way of looking, it will probably be the new configuration field for further investigation. The present study takes aim at analyzing neuropsychological profile of MCI subtype (Amnesic MCI Multiple Domain) with cognitive deficits in executive functioning to evaluate if they represent the highest risk of incipient dementia. One hundred subjects with a neuropsychological diagnosis of MCI formed the sample. They were assessed by a wide neuropsychological battery which included the

investigation of Memory System, Attention System, Visual Agnosia, Constructive Apraxia and Language. Executive Functioning was tested by the Stroop Color Word Interference Test and the Attentive Matrices to evaluate selective attention, the Verbal Fluency Test to evaluate mental flexibility, the Frontal Assessment Battery (Subtest 5: Go-No-Go) to evaluate inhibitory control, the Brixton Test to evaluate rule learning and set shifting, and the Tower of London to evaluate planning abilities. According to Petersen's classification of MCI (amnesic versus not-amnesic, single versus multiple domain), MCI Type II represents the majority sub-category of the whole sample. Within frontal domains impairment, inhibitory control, planning and sequencing tasks with rule changing, are more frequently deteriorated. Our research confirms that the starting symptomatology consists of executive functioning decay in a considerable average of MCI subjects, even if declarative memory deficits are the most frequently impaired. The premature executive impairment represents a decisive risk factor for the conversion of mild cognitive impairment into dementia. Moreover certain areas of executive functioning are more fragile than others. These conclusions suggest that future research should pay attention to dysexecutive dysfunction as the main cofactor along with memory decline in mild cognitive impairment and dementia.

Keywords: *mild cognitive impairment, dementia, executive function, neuropsychological assessment, declarative memory*

Coping in difficult situations by youth endangered with social exclusion

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The objective of this research was to determine the relation between psychological personality constructs and how youth endangered with social exclusion function in difficult situations. The research involved 122 subjects – adolescents from middle and secondary school students, representing various family and social experiences. The subjects were examined with reference to their level/degree of social exclusion risk, ways of coping in difficult

situations, locus of control (LOC), pragmatism, and the need of social approval. The subjects were divided into four groups representing various levels of social exclusion risk as well as various, characteristic of each group, methods of coping in socially difficult situations. The tool applied in order to compare the average results of the above variables in individual groups endangered with social exclusion was the single-factor analysis of variance (ANOVA). Statistically essential differences were found with the scales of Coping ($F(118, 3) = 9.66; p < 0.001$) and LOC ($F(118, 3) = 7.02; p < 0.001$). The analysis of correlations between the variables revealed a strong relationship between preferred preventive behaviours in difficult situations and LOC: $r^2 = 0.75 (p < 0.001)$. In addition, during the research, it was possible to observe statistically essential correlation factors between: the group endangered with social exclusion and the variables of Coping $r^2 = 0.44 (p < 0.001)$; LOC $r^2 = 0.38 (p < 0.001)$ and Need of Social Approval $r^2 = 0.18 (p = 0.048)$, as well as between the Need of Social Approval and preferred preventive behaviours $r^2 = 0.56 (p < 0.001)$ and Locus of Control $r^2 = 0.54 (p < 0.001)$. The statistical analysis revealed that subjects of the group representing the highest risk of social exclusion are characterised by external LOC and escapist methods of coping in difficult situations. A very low or very high result on the self-monitoring scale reveals unadaptiveness of social behaviours, rigidity or excessive adaptation to social environment in isolation from one's own needs. The subjects from the group representing the highest risk of social exclusion probably ignore social signals enabling social inclusion. The discussion will be concerned with the ways of identification of such processes in endangered environments and the methods of therapeutic work.

Keywords: *personality constructs, youth social exclusion, social approval need, locus of control, self-monitoring*

Coping styles and family support as predictors of well-being in high school students

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This study examined family support as a mediator of the relations between coping styles (active and support seeking) and wellbeing in high school students. Participants were high school students ($N = 156$) aged 12 to 16 years ($M = 13.44$ years, $SD = .85$). Forty five percent of the sample was female. The measures used in the study included the WHO Well-Being Scale – 5 (Heun et al., 1999), the Child and Adolescent Social Support Scale (Malecki, et al., 1999) and the Children's Coping Strategies Checklist (Ayers et al., 1996). Participants completed the measures in one testing session at school. Regression analyses, using the procedures outlined by Baron and Kenny (1996), investigated whether family support mediated the link between coping strategies (active and supportive) and wellbeing. Significant, positive linear associations were found between coping (active and support seeking) and wellbeing, between coping (active and support seeking) and family support, and between family support and wellbeing ($r = .43, p < .01$). Using mediation analyses, results show that when family support was entered into the regression equation with active coping, family support was the only significant contributor to the relationship with wellbeing ($z = 2.25, p = .02$). Similarly, when family support was entered into the relationship with support seeking coping, only family support remained a significant contributor to the relationship with wellbeing ($z = 3.28, p = .00$). This study examined the extent that coping styles (active and support seeking) and family support account for wellbeing in high school students. Mediation analyses found the effect of either active coping strategies or support seeking coping strategies on wellbeing occurred as a result of the relations between each of the different coping strategies and family support. The results of this study highlight the importance of supportive family relationships to coping styles and as predictors of wellbeing in high school students.

Keywords: *support-seeking, well-being, support, child and adolescent social support, children's coping skills*

Coping styles, affective responses and examination performance of university undergraduates

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Previous research has shown that emotional intelligence has an indirect beneficial influence on exam performance among university students by reducing psychological distress and negative mood states. The present study sought to extend this line of investigation by assessing whether the coping styles of students also influenced the impact of affective responses on examination performance. A sample of 329 undergraduate students from an Australian university completed the Coping Orientation to Problems Experienced (Brief COPE) to establish coping styles. They then completed the Brunel Mood Scale (BRUMS) and the Depression, Anxiety and Stress Scale (DASS-21) on three occasions during a university semester to monitor affective responses. Examination performance at the end of semester was recorded. Affective responses showed that participants found university study to be stressful. They reported high levels of psychological distress throughout the semester, with mean values for all subscales above the ninetieth percentile. Similarly, mood responses were above the norm for negative mood dimensions. Exploratory factor analysis identified four coping factors, termed approach, avoidance, reframing and problem disengagement. Regression analysis showed that high scores for avoidance and problem disengagement predicted psychological distress and negative mood states over the three testing occasions. Psychological distress mediated relationships between coping styles and negative mood states at mid-semester and pre-examination. Coping styles and mood responses predicted examination performance, whereas psychological distress did not. Use of problem disengagement as a coping strategy was associated with poor exam performance, whereas higher mid-semester and pre-exam tension, higher pre-exam vigour, and higher mid-semester fatigue were all associated with good exam performance. Results showed that coping styles of university students predicted psychological distress, mood responses and exam performance during the course of a semester of study, and highlighted the negative effects of avoidance and problem disengagement coping. This raises the possibility

of implementing programs for undergraduate students to encourage their use of adaptive rather than maladaptive coping strategies.

Keywords: *exam performance, emotional intelligence, coping, problem disengagement, affective responses*

Coping with chronic life threatening illness: The Filipino adolescent's experience

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This study looks into the process of coping for the Filipino adolescent with chronic life threatening illness. A chronic illness is defined as a "a condition that lasts for a substantial period of time or that has symptoms that are debilitating for a long period of time" (Perrin, 1985, p. 2). It often involves the presence of multiple physical and psychological symptoms that are highly pervasive and emotionally stressful (Squirres, et. Al 2002). The life of an adolescent is generally made more difficult by the need to balance the developmental demands of adolescence and the challenges brought about by the diagnosis of chronic life threatening illness. Using a multiple case study design, the study documented the experiences, hardships, and coping of 10 chronically ill adolescents aged 14-19 years with an illness duration that ranged from 4 months to 19 years as reflected on their own narratives based on in-depth interviews. Results indicated that chronic illness changed the world of the adolescent and made living a challenge. The reactions of the adolescents to their condition varied greatly from disbelief to active acceptance, to denial and resignation. The study highlights some uniquely Filipino ways of coping with chronic illness such as the use of insights, reflections and the instrumental role of families in helping these adolescents to find unique ways to cope with their health conditions and live enriched lives with, and not despite of, their illness.

Keywords: *coping strategies, chronic illness, adolescence, Filipino, case study*

Core concepts of Self: Therapeutic value and the development of an inventory for their measurement

BRABIN, P. (Monash University)

Some 30 years ago the self-esteem movement advocated the promotion of high self-esteem to replace the suffering of low self-esteem. This 'movement' has influenced policy and procedures in educational and parenting programs world-wide. Sadly, this has not led to the desired outcomes for 'happiness' in our current society. Instead, the rates of depression and suicide have increased several-fold. Inspection of typical 'self-esteem' inventories indicates they usually measure an externally validated self-construct, expressing high levels of subjective control yet lacking the notion of an internally validated self-identity. While the construct of 'self' has been part of psychological theory since Freud and Kohut, empirical science has largely ignored a construct not readily observable. Karen Horney, however, did suggest a framework for analysis; self idealisation and its mirror image self hatred juxtaposed with their qualitatively different self realisation. Her work influenced Albert Ellis in his theory and application of Rational Emotive Behaviour Therapy. Although focussing on self- acceptance as a core component of the theory, Ellis failed explicitly to differentiate the core irrational self, Horney's duo of self-idealisation and self-hatred, from the core rational self defined by self-realisation. Despite recognising the dynamic differentiation between these – living to prove oneself versus living to enjoy oneself – Ellis did not clearly articulate the risk of remaining subjectively bound within the self. This paper proposes a model which articulates and expands an objective concept of self, the internally validated OK self (who I am) and the value-laden duo, the Not-OK self (what I am) with its defensive reaction the Not-Not-OK self (what I should be) which emerges from attempts to prove that one is not Not-OK. This model describes numerous processes related to living an emotionally healthy life and clearly locates many common sources of distress, including personality disorder, providing a readily assimilated framework for case formulation in therapy. The development and preliminary data for a 'self-valuing' inventory designed to

measure loadings on the subjective and objective constructs of the self is also presented, as a means of providing empirical data for this core therapeutic model.

Keywords: *self-concept, self-esteem, self-valuing, inventories*

Corporate performance and work stress of contact centers in Manila, Philippines

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The booming contact center industry in the Philippines is characterized by intense, global competition with the goal of optimizing corporate performance. Contact center agents in this industry experience varying work stress levels caused by inherent and unique dynamics of the job. This investigation aimed to determine the relationship between Philippine contact centers' corporate performance and their agents' work stress levels. Descriptive-correlation method was used to measure the levels and analyze the relationship between the variables of this study. Specifically, corporate performance is evaluated using the profitability ratio analysis of financial statements of four selected contact center corporations in Manila, Philippines. Work stress of 257 rank-and-file contact center agents from the four selected contact centers were measured using the Job Stress Survey (JSS), a standardized psychological instrument developed by Spielberger and Vagg (1999). Four out of the five ratios (i.e. Return on Asset and Equity, Asset Turnover, and Net Profit Margin) indicate high profitability, as compared to global industry standards. Although there is no significant difference among corporate performance of the selected contact centers, Company D stands out as it is the only company that surpassed industry standards on all five profitability ratios. Company A is also notably profitable with the highest average of 0.80 in the five profitability ratios among other companies. Contact center agents are moderately stressed as indicated by the average JSS t-score of 59 while company-specific t-scores range from average to high work stress. Company A has the healthiest level and a moderate level of work stress while Company D has the highest and most unhealthy level. Pearson Correlation

results at 0.05 level of significance show that corporate performance is significantly and negatively correlated with work stress. Specifically, high corporate performance of contact centers is related to low and moderately stressed agents. The contact center agents who have healthy work stress levels tend to belong to highly profitable organizations while those with high and unhealthy work stress are associated with organizations which are not as profitable. The coefficient of determination also shows that work stress accounts for 5% to 26% of the variability in corporate performance, and vice versa. Therefore, sustained success of Philippine contact centers involves various salient business factors including healthy contact center agents who are motivated by moderate work stress. Moreover, improving the quality of work life of contact center agents may directly translate into better corporate performance.

Keywords: corporate performance, company profitability ratios, work stress, rank-and-file employees, global industry standards

Correlation research of urban residents' lifestyle and physical fitness

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The aim was to research the correlation of Urban Residents' Lifestyle and Physical Fitness. Two hundred urban residents were selected randomly who were twenty to fifty nine years old in Chongqing. A lifestyle questionnaire was used and 190 valid questionnaires were returned. The results were: 1) All the subjects' average scores of physical fitness were more than 25, which is in the excellent level. For all subjects, the physical fitness scores of 40 to 49 and 50 to 59 years old were slightly lower, but the scores were between 22 and 23, which is in the good level. 2) The lifestyle scores of females were higher than those of the males. The group of 40 to 49 years olds had the highest scores, followed by the group of 50 to 59, 20 to 29 and 30 to 39 year olds; 3) There was a distinct correlation between physical fitness and lifestyle. Reaction time, which is one of the indicators of physical constitution, had a significant relationship with the use of drugs, alcohol and tobacco, life satisfaction, health

habits and sexual life. Lung capacity, one of the indicators of body's functional capacity, was significantly related to the use of drugs, tobacco and alcohol and health concept. In conclusion, 1) There was a distinct correlation between the action tropism of lifestyle and physical fitness; 2) There was distinct correlation between the height, weight of urban residents and work and sleeping; 3) There were distinct correlations among the lung capacity of urban residents, the use of substances, tobacco and alcohol health values; 4) There were distinct correlations among the reaction time, the use of substances, tobacco and alcohol, health habits, sexual life and life satisfaction; 5) This research pointed out the theoretic model to promote the adults' physical fitness for the first time.

Keywords: urban residents' lifestyle, life satisfaction, health habits, substance abuse, adults' physical fitness

Cover story: Body image messages on the cover of popular Australian weekly magazines

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Recent ethological theories of social anxiety have emphasized that social anxiety is related to perceptions of social rank. While a submissive type of social anxiety (cf. DSM-IV-TR) has been extensively studied, recent cluster analytic studies have identified a variation associated with dominant/aggressive, impulsive and disinhibited behaviours. Viewed through the lens of Personality Psychology, this type shares similarities with narcissistic personality. Therefore, the current study sought to explore the role of narcissism in social anxiety. In response to notices on social anxiety websites, 349 people completed a questionnaire. The questionnaire measured social anxiety (Social Interaction Anxiety Scale), narcissism (Narcissistic Personality Inventory), covert narcissism (Hypersensitive narcissism scale), narcissistic pathology (Narcissistic Personality Disorder scale), anger (Dimensions of Anger Reactions), Shame (Experience of Shame Scale) and Depression (Depression, Anxiety, Stress Scale). The sample was heterogeneous with 150 participants in North America, 141 in Europe, 40

in Australia/New Zealand, 10 in Asia, and seven in other regions. Ages ranged from 18 to 74. Cluster analysis of the data revealed the presence of five distinct social anxiety clusters. Subsequent multivariate analysis indicated that the groups significantly differed on social anxiety, narcissism and anger. On the basis of group differences in these variables, the groups were labelled: narcissistic social anxiety group (NSA), covert narcissistic social anxiety group (CNSA), angry covert narcissistic social anxiety group (AnCNSA), general social anxiety group (GSA) and low social anxiety group (LSA). In terms of social anxiety, the covert narcissistic groups were more impaired than the other groups. Additionally, all three social anxiety groups with narcissistic characteristics evinced higher scores on measures of depression and shame than the non-narcissistic social anxiety groups. The current results are consistent with Paul Gilbert's ethological model of social anxiety. Viewed from this perspective, the narcissistic social anxiety groups can be characterised as individuals who have a perception of low social rank (high social anxiety) coupled with a desire for power, control and grandiosity (high narcissism) but feel unable to "challenge" those perceived to be dominant for fear of the interpersonal consequences of such a challenge. More broadly, the current results suggest that social anxiety is a broad and heterogeneous phenomenon, and that re-analysis of social anxiety using alternative theoretical paradigms (such as ethology) yields meaningful distinct variations of the disorder.

Keywords: *body image, print media, disordered eating, Australian women*

Crisis and consumer behaviour: A pilot study in Spain

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The aim of the study was to describe the economic perception of Spain by Spanish people and to analyse the links between "crisis perception" and "consumer behaviour" and its influence in "hedonic balance". The study sample comprised 50 households and participants completed the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1984)

and a four factor ad-hoc scale ("Economic Perception", "Consumption", "Purchasing Styles" and "Lifestyle"). The data was analysed using SPSS 16.0 and a range of statistical analyses were conducted including descriptive statistics, correlations, and non-parametric techniques. Most of the respondents state that the country is facing a crisis; however, they think that the economic situation has not changed by the crisis. On the other hand, respondents believe that their economic situation is slightly lower than in the currently overall country, although this perception is the opposite when considering the pre-crisis period. Moreover, respondents consider that changes in the overall evolution of consumption have not been significant except for leisure activities. Also, according to respondents, there have been no changes in most purchasing styles except for "prices and shops comparison", "quality-price focus", "purchase of second brands or generic" and "information increase before the shopping/buy". In all these cases there has been an increase in those activities. Respondents affirm that the only changes that have occurred regarding to lifestyles are: a decrease in "going out" or "going out for a meal" and an increase in "home meals" and "extend the useful life of objects". Regarding "hedonic balance" and "economic perceptions" it is not possible to conclude that exist a significant relations between them with our sample. Some variables may be modulating the effect of the crisis. Currently work is focused on expanding the sample with other different households and on controlling those variables.

Keywords: *crisis perception, consumer behaviour, hedonic balance*

Cross-cultural adaptation of the U.S.A. students in China

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More and more international students are coming from the U.S.A. to China. There were 223,499 foreigners studying in China by the end of 2008, with students from the U.S.A. ranked second. The objectives of the current research were to understand students' adaptation to situations and strategy in China, and explore the main factors influencing their psychological and

sociocultural adaptation, as well as how their adaptation influences their studying performance in China. International students from the U.S.A. who had studied in Shanghai (east China) or Chengdu (south-west China) for three months or more completed questionnaires ($N = 65$). The core variables were sociocultural adaptation, psychological adaptation and acculturation strategy. The antecedent variables were multicultural personality, cross-cultural communication self-efficacy and Chinese language competency, and the outcome variable was studying performance. The results showed that for acculturation strategy 58.5% of the sample adopted separation, 13.8% marginalization, 12.3% integration, and 7.7% assimilation. For adaptation, sociocultural ($M=3.94$, $SD=0.55$, 1-5 rating) and psychological adaptation ($M=3.69$, $SD=0.56$, 1-5 rating) was good, and for antecedent variables, two sub-dimensions of multicultural personality, openness and emotional stability and cross-cultural communication self-efficacy, were significantly positively correlated with both adaptation variables. For outcomes, two adaptation variables were significantly positively correlated with performance. Flexibility, emotional stability, cultural empathy, self-efficacy and Chinese language competency were the main factors influencing two adaptation variables, and these two variables influenced performance. The general trends of the current research were consistent with previous research about international students in other countries, but there were some differences. Although more than half of the students adopted separation strategy, most of them adapted well in China. Their choices of strategies were due to living and studying together with their conations in most situations. Social initiative, one sub-dimension of multicultural personality, did not show significant positive correlation with adaptation. The reason for this is not clear; however one possibility is that students perceived that Chinese culture did not emphasize social initiative. Future research may include more samples from other regions of China and qualitative research such as interviews can be used to gain specific information about students' adaptation. Personal change can be included as one of the outcome variables.

Keywords: *Cross-cultural adaptation, Multicultural personality, Sociocultural adaptation, Psychological adaptation, International students*

Cross-cultural study on peer experience and loneliness of Chinese and American children

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Multiple mediating effects between peer experience and loneliness were investigated in this research among Chinese children. The influence of peer interaction on loneliness in the comprehensive ecological background (China & America) was also taken into consideration. Sociometric nomination and questionnaire method were applied in this study. Participants were 430 Chinese children and 165 American children in elementary school from grade four to six. The children completed Peer Nomination, Friendship Quality Questionnaire, Class Play, and Who am I?, in June 2005. Cross-cultural design was employed in the study. The data were mostly analyzed by t- test, SEM and MANOVA. The results of the study are as follows: (1) A significant correlation was found between peer experience and loneliness; (2) Chinese children get higher scores on friendship quality, while American children get higher scores on self-perceived social competence and loneliness; (3) Social behavior had an impact on loneliness through four different types of mediating path: (a) social behavior \rightarrow social preference \rightarrow self-perceived social competence \rightarrow loneliness, (b) social behavior \rightarrow friendship quality \rightarrow self-perceived social competence \rightarrow loneliness, (c) social behavior \rightarrow friendship quality \rightarrow loneliness, and (d) social behavior \rightarrow self-perceived social competence \rightarrow loneliness. There was only an indirect relationship between loneliness and social preference, and there were direct and indirect relations between loneliness and friendship quality. Self-perceived social competence was the most powerful predictor of loneliness. (4) The predictive power of friendship quality to self-perceived social competence; and self-perceived social competence to loneliness in China are greater than in American. The conclusions drawn from this study are as

follows: (1) Chinese children get higher scores on friendship quality while American children get higher scores on self-perceived social competence and loneliness; (2) there was no significant cultural difference on the functioning pattern between peer experience and loneliness; and (3) the predictive power of friendship quality to self-perceived social competence; and self-perceived social competence to loneliness in China are greater than those in America.

Keywords: *loneliness, children, cross-cultural, friendship, Chinese*

Cross-cultural validity of integrity testing: A tale of three banks

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Integrity is universally considered to be a key requirement for a variety of jobs, and integrity tests have increasingly found their places in employee selection processes around the world as a result. Integrity tests are especially prevalent among financial institutions, where preventing Counterproductive Work Behaviors (CWB) is paramount. Despite consistent research describing the effectiveness of integrity tests for predicting CWB, very little data is available from non-American samples, and even fewer from cross-cultural comparisons. The present study, therefore, aims to provide contributing evidence towards a better understanding of the cross-cultural validity of integrity testing in general and the financial sector in particular. This study was based on data collected from 1,632 job applicants from three large financial institutions located on three continents: South America (29%), Asia (31%), and Eastern Europe (40%). All applicants were administered a commercially available integrity test as well as a CWB admissions survey as part of their selection processes. Significant test score differences were found across the groups, as expected considering the large cultural differences between them. However, no evidence of adverse impact for age or gender was found for any sample, which is critical for adhering to legal and international best practice standards. The operational validity for predicting CWB was significant overall ($r = -.30$), and was remarkably

consistent across all three samples ($-.32 \leq r \leq -.30$). In addition, based on a derivation of the Brogden-Cronbach-Gleser utility model, the total monetary savings for these companies in using the integrity test for selection was estimated at more than \$391,000 by preventing counterproductive behaviors. This study provides compelling evidence towards the effective use of integrity tests cross-culturally for personnel selection. The results support the validity generalization literature by showing successful transportability of validity across different settings, and attest to the relevance of integrity as a key job requirement cross culturally. Finally, the results of this study are believed to be of particular importance to the numerous organizations and practitioners using integrity tests internationally today.

Keywords: *integrity, counterproductive work behaviour, cross-cultural personnel selection, predicting work behaviors, employee selection processes*

Cultural activities and math literacy among Saoras in India: Learning as dialectic between self, meaning systems and boundary concepts in MLE Plus schools

PANDA, M.

Numerous artifacts, cultural concepts and practices mediate mathematics learning, both in the community and in school. At home, mathematical concepts, ideas and numbers are embedded in children's everyday activities like play, shopping, making brew, cultivating, house making etc. Saora child, like any other child anywhere in the world, learns many mathematical concepts and ideas by engaging in these artifacts. In school, she finds the language (and, therefore, the cultural concepts) and the artifacts (such as textbooks, note books, games, measurement, writing using a specific convention) in mathematics and science class neither familiar nor comprehensible. In order to make learning meaningful, culturally relevant and worth engaging in, we intervened in four multilingual education (MLE) schools in Saora areas using the principles of CHAT (the third generation Cultural Historical Activity Theory as espoused by Engestrom and Cole, 1997). We call

this program MLE Plus since, along with using children's language(s) in the classroom, we tried to create numerous contact points between Saora children and school mathematics discourse by allowing many boundary concepts to operate between Saora artifacts and cultural practices and school mathematical concepts/discourse through specially designed pedagogic practices. This paper discusses how the classroom discourse took the shape of many interlinked spirals and learning in these classrooms was more a byproduct of the dialectical relationship between Saora artifacts (like Saora number system, Saora folk games, make belief plays etc.), meaning systems, school mathematics concepts and the agencies of Saora children and teachers. We clearly chose a little more messy, chaotic but multi-voiced multimodal non-linear spiral discourse over a clean, clearly laid down linear discourse.

Keywords: *mathematics, Saora, Cultural Historical Activity Theory, classroom discourse*

Cultural influence on personal epistemology: Variations of epistemic beliefs of Thai university students

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The purpose of this study was to explore the cultural influence on personal epistemology through comparison of groups of students sharing the same culture except one aspect: type of secondary education. This study investigated the nature and dimensional structure of the beliefs about knowledge and knowledge acquisition held by Thai university students. It further examined whether their epistemic beliefs were significantly different among the groups of Thai students educated in different secondary educational systems. The participants of this study ($N = 405$) were recruited from undergraduate students studying in a Thai university. They were all Thai native speakers and of Thai nationality. The students completed a 39-item questionnaire, developed for this study from two versions of Schommer's (1998) Epistemology Questionnaire. The participants were asked to indicate how they agreed or disagreed with the statements about domain-general epistemic beliefs given in the

items in the measurement instrument. A five-factor structure was identified for the epistemic beliefs through a principal component analysis of the participants' responses to the 39 items in the questionnaire. MANOVA identified a significant difference among the groups of students educated in different systems of secondary education in terms of two of the five identified factors. In addition, a significant difference was also identified between the two groups of students differing in their previous English language learning experience in terms of one of the five factors. Meanwhile, no significant difference was identified in terms of their epistemic beliefs between the groups of participants differing in the demographic variables, i.e. age, gender, and declared subject major. The results suggest that students might have different epistemic beliefs if they were educated previously in a different educational system, even if they all share the same cultural backgrounds, including the native language. Thus, it is likely that education could make an impact on personal epistemology, at least on the one that was measured in this study.

Keywords: *personal epistemology, beliefs, epistemology questionnaire, epistemic beliefs, cultural influences*

Customer orientation and type of organization : Impact on levels of achievement and control orientation of an organizational climate

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The aim of this research was to analyze the differential effect of high/low customer orientation on the achievement and control orientation of organisational climate, and to see how the type of organization (public and private) effects the achievement and control orientation of organisational climate. About 500 employees of Public and Private Sector Banks of Chhattisgarh region, India, were requested to respond on a given scale for measuring their perception on prevailing levels of Customer Orientation in their banks along within its Organisational Climate. To measure Organization Climate, a comprehensive tool prepared and

developed by Udai Pareek (1997) was used called Motivational Analysis of Organisational-Climate (MAO-C). MAO-C was designed to study organisational climate, with special regards to motivation. To measure perceived customer orientation, a scale has been developed by the investigator. To test the significance of differences, the F-ratio was calculated. The results showed that the high customer oriented employees perceived their organization to be more ($M = 69.55$) achievement oriented compared to low customer oriented employees ($M = 64.05$). F-ratio was found to be significant ($F = 15.95$, $p = 0.01$), indicating a significant difference between the two groups with respect to their perception organizational climate. The obtained results showed that the high customer oriented employees perceived their organization as less control oriented ($M = 45.33$) compared to low customer orientation employees ($M = 53.33$). The F-value was found to be significant ($F = 23.29$, $p = 0.01$) indicating a significant difference in the two groups with respect to their perception of control dimension of organisational climate. The mean score of employees working in Private Sector Banks was found to be more on achievement dimension ($M = 73.81$) compared to the mean score of employees working in the Public Sector Banks ($M = 61.20$). It indicates that employees of private sector banks perceived the climate of their banks as more achievement oriented than employees of public sector banks. The F-ratio ($F = 73.48$, $p = 0.01$) was found to be significant. Findings in this regard indicate that the mean control score of private sector employees ($M = 42.20$) was less compared to private sector employees ($M = 55.04$). The F-value ($F = 36.04$, $p = 0.01$) was also found to be significant indicating thereby a significant difference between the two groups. In other words employees of public sector perceived their organization as more control oriented compared to private sector bank employees. The main finding of this research work is that the high customer orientated employees perceived their organization as more achievement oriented whilst low customer oriented employees perceived their organization as more control oriented. Similarly, private sector bank employees perceived their organizational climate as achievement oriented while public sector bank employees perceive their

organizational climate as control oriented. High customer orientation leads to low control oriented climate.

Keywords: *customer orientation, organisational climate, achievement orientation, control orientation, private sector bank employees*

Cyberspace, interactive media and video games: The impact on psychological development and well being

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The aim of this research was to discuss how interactive technologies impact on a person's relationships and emotional and social well-being. The new frontier of cyberspace, interactive media and video games, are increasingly mimicking real life experiences, which calls for a revision on how they are developed and legislated. The method will involve gathering qualitative evidence utilising video, media and case studies on the following: (1) Game developers, designing interactive environments to induce emotional responses and reactions; (2) Interactivity of cyberspace allows many services (including counselling) to take place in this environment, with little legislative framework to assist consumers; (3) Addictive behaviours relating to interactive devices, such as texting, social networking, interactive video games and multiplayer environments, (4) Educational and developmental issues that require stringent policies, regulations and legislations to guide and inform parents, protect children as well as providing health and safety guidance for consumers. Research on this area is emerging with a number of social and psychological studies show both positive and negative views on the uses of technology media. Presently however the body of research is inconclusive regarding the impact of interactive media has on children's and adolescent's development. There are emerging trends to indicate that utilising this media excessively can induce addictive behaviours impacting on persons' social and emotional well being. There are also trends to indicate that a person's social and economic well being is enhanced by utilising this technology. However the broader social context of how appropriately the interactive media to "fits in"

with people's everyday lives is often overlooked as the technology presently being developed is increasingly being developed to engage and encroach on people's lives. Technology has a number of uses that can enrich people's well being which can most commonly be seen in the area of disability and rural and remote services. There are also increasing educational uses that can be immensely beneficial for parents, educators and service providers. However with a large proportion of this technology being utilized for entertainment and being increasingly developed to get people's attention and evoke emotions there are a number of issues that psychologists should be addressing, including: (1) Developmentally appropriate content; (2) How the uses of technology impact on day to day life, and people's perception of relationships and social and moral norms; (3) How does the technological environments impact on people's ability to express themselves, be creative and freedom of speech, considering the diversity of people's cultures, nationalities and communities; (4) People's ability to trust and be emotionally engaged to the content; (5) How to assist societies, communities, people and individuals to contextualize (make sense) between real life and technological environments; (6) How does (or should) interactive media impact on the most profound human emotions, such as love, anger, trust, honesty. Social dynamics can impact on people at a personal level, for example, work-family time, privacy, confidentiality and cyberbullying. Some of the social and financial costs of using technology include the "technological inflation", keeping up with the Jones' and the have or have not mentality.

Keywords: interactive technologies, addictive behaviours, emotional well-being, social well-being, cyberbullying

David gNATenborough's Island: A new computerised CBT game for children

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This oral presentation will describe David gNATenborough's Island, a new six-session

Cognitive Behavioural Therapy (CBT) programme for children delivered through a computer game. It is played by children in clinical sessions with their therapist. It delivers a CBT programme for the treatment of young people who experience anxiety and mood disorders. Core principals of a CBT intervention are taught to a young person by a computer character called David gNATenborough who presents the cognitive model for internalizing problems where Negative Automatic Thoughts are introduced as gNATs. In playing the game over six sessions the young person is taught thought monitoring (gNAT trapping), thought restructuring (gNAT swatting), and core belief appraisal and restructuring (following gNATs back to their hive). The PC game format and characterisation of CBT techniques makes the programme appealing and easily accessible for children. Preliminary results on the effectiveness of the programme with anxiety, mood and somatisation difficulties will be presented. David gNATenborough's Island effectively combines interesting characters in a PC game world with direct intervention from a clinical psychologist to teach young people with internalizing difficulties how to benefit from CBT.

Keywords: cognitive behavioural therapy, anxiety, mood disorders, young people, internalizing difficulties

Dealing with diversity and dissent in cross-cultural virtual teams: Convergent qualitative and quantitative analysis

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Collaboration in a globalised environment implies specific requirements and possibilities. Increasing numbers of allocated teams are challenged with new communication forms and organisational and cultural differences. Because of the structural complexity and difficulty to reach this target group, they are seldom addressed in research studies. In order to fill this gap, two highly virtual operating teams from a Swiss engineering company, with collaboration partners in Croatia and India, have been studied for over 12 months. To identify when diversity emerges and how it is dealt with in allocated collaboration, we used a multi-method approach. In the first step, expert interviews

with 17 project leaders and key project team members took place. Summative analysis identified foci for further research: management of dissent against the background of cultural differences, mutual learning for process and organisational improvement, and communication climate and tools in use. In the following phase we conducted guideline-based interviews with 16 experienced team members from the three respective locations. Confirmatory analysis displays the assumed differences in culture, communication, and conflict management, and provides opportunities for mutual learning. Similarity is found regarding the preference of face-to-face communication whenever possible and getting to know the other members personally to overcome cultural differences. In the final step, 15 allocated team members of ongoing virtual projects completed a total of 30 event-based questionnaires each time a communication event took place within a defined period. Correlation analysis identifies specific situations where differences and dissent emerge. The perception of the communication climate and conflicts relates to the character of the communication event, such as intention, structure and complexity of content. The results are currently brought together and practical suggestions for structuring collaboration in virtual projects are made. Strengths and limitations of our approach will be discussed as well as implications for further research. The results may affect conflict management in cross-cultural cooperation.

Keywords: collaboration, virtual operating teams, cross-cultural issues, communication

Decision-making and egalitarianism in Chinese young children

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Human social interaction is strongly shaped by other-regarding preferences. These preferences are important for a unique aspect of human sociality – large scale cooperation with genetic strangers – but little is known about their developmental roots. Ernst Fehr's research published in *Nature* (2008) showed that young

children's other-regarding preferences indicated that human egalitarianism and parochialism have deep developmental roots and the simultaneous emergence of altruistic sharing and parochialism during childhood. Ernst Fehr believed the results were perfectly interpreted by the evolutionary theories. However, we highly doubted the universality of the conclusions and explanations so we replicated the experiments using the same designs and methods to investigate the egalitarianism and decision-making in Chinese young children. We recruited 243 young children (aged 4-8 years) from a kindergarten and a primary school in China for our experiments so as to learn about the development about Chinese children's concepts of fair, generous and other-regarding preference. We also analyzed the reasons for the differences of cognitive egalitarianism. Each child played the pro-social game, the envy game and the sharing game against anonymous partners. The partners came either from the in-group or from an out-group. Results show that the concepts of sharing fairly and altruism have emerged to some degree between the ages of 4 and 8. In addition, Chinese young children's other-regarding preferences assume fairness that develops strongly between the ages of 4 and 8. Moreover, fairness is strongly shaped by parochialism, a preference for favouring the members of one's own social group. The results above are identical to Fehr's; however, Chinese children show significant differences to western children in some aspects. In a contrary direction, parochial egalitarianism emerges more frequently in Chinese boys than Chinese girls. Fehr's conclusion and explanation about differences in gender in the view of the evolutionary theories cannot apply to the results above at all. These results indicate human egalitarianism and parochialism do have deep developmental roots, but the universality of the evolutionary theories concerning egalitarianism's development in young children must be scrutinized in the context of multi-cultures with discretion.

Keywords: other-regarding preferences, young people, cultural diversity

Deepening the in-depth interview: A case study of the athlete-to-coach transition

using conversations and projective data gathering techniques

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The aims of the current study were: (1) to construct an in-depth picture of one individual's transition from athlete to coach in an attempt to learn more about relocation within sport after athletic retirement; and (2) to determine if the Athlete Apperception Technique (AAT; Gibbs, 2006) could elicit material that complemented, illuminated, and added to the information gathered from the in-depth interview, and help provide a more complete picture of the lived experience. This research used a qualitative approach to explore the transition experience of a retired tennis player who became a coach. The participant's story was collected using an in-depth semi-structured interview and is presented as a case study. The AAT, which is a projective technique designed specifically for athletes, was also administered. This tool is designed to tap into athletes' personality features, relationships, anxieties, motivations, perfectionism, and so forth at the conscious and subconscious levels. It involves presenting athletes with ten ambiguous images relating to different sport situations. Athletes are asked to create stories based on the images, and their responses are analysed using sport psychology and psychodynamic formulations and interpretations. The data collected from the AAT were used to complement and add to the participant's in-depth interview. The information collected from the interview shed light on the athlete-to-coach transition, and highlighted the messiness and complexity of the lived experience. The participant's responses to the AAT images complemented, clarified, and added to the in-depth interview, and allowed a greater, and clearer, understanding of the athlete-to-coach journey. The AAT is an exciting tool and might be a useful technique that sport researchers and practitioners could use to access processes that are not easily studied using common data collection methods.

Keywords: *athletes, coaching, sport, athlete apperception technique, qualitative*

Deliberate self-harm, childhood trauma and dissociation in a homeless sample

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Childhood trauma (CT) is assumed to play a role in the development of both dissociation and deliberate self-harm (DSH), although conjecture exists regarding the impact of different types of trauma. The purpose of this study was to investigate the extent and association of DSH, CT, dissociation and substance abuse in a homeless population, as well as to examine the relationship between DSH, types of CT and dissociation in more detail. Eighty homeless participants who presented to a housing service completed a questionnaire comprising housing and demographic questions, as well as a variety of standardized measures investigating childhood trauma, dissociation and deliberate self-harm. Due to extreme skew in some variables, data were analysed using non-parametric testing and logistic regression. Results identified high rates of pathology across the range of measures used, when compared with community sample scores. Positive associations were found between, DSH, dissociation, drug abuse, emotional abuse, physical abuse, emotional neglect and physical neglect. No such associations were found between DSH and sexual abuse, alcohol use, or length of homelessness. When comparing individuals who did, with those who did not report DSH, similarly there were significant differences identified between groups for all variables except sexual abuse, alcohol abuse or length of homelessness. Dissociation and physical abuse emerged as strong predictors of DSH in this sample, particularly when comparing those who reported no DSH with and those who are, or have been, frequent self-harmers. In conclusion, results serve as a reminder that homeless people are a very vulnerable group along a range of physical and psychological dimensions. Service providers working with the homeless may need to be more proactive both in identifying, and assisting interested individuals to link with psychological support as well as accommodation services where such histories and behaviours are present.

Keywords: *dissociation, deliberate self-harm, childhood trauma, homelessness*

Dentistry and design: An interprofessional online learning program in oral health promotion

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Dental caries is the most prominent chronic disease affecting oral and systemic health. It is preventable but nevertheless presents as a global pandemic affecting all age groups, despite measures for its prevention being known and available for decades. Key factors in the failure of oral health promotion campaigns have been poor understanding of the relevance of oral health literacy and the tendency to define literacy without reference to semiotics or other visual design components. The interprofessional dentistry/design project aims to teach students the skills required for successful promotion of community oral health in published media. Dentistry and design students collaborated to devise solutions to the problem: how can the message "Tooth decay can be stopped, reversed and prevented" be communicated effectively to various target community audiences (parents, children, adolescents, ethnic groups, etc). The groups were required to design promotional products (brochures, booklets, games, PowerPoints) for use by health educators. In 2009, the project was expanded as a virtual interprofessional collaboration, Hong Kong architecture students acting as design consultants to Australian dentistry students. Promotional designs were presented in virtual seminars and evaluated in terms of health evidence (community dentistry) communication (behavioural sciences) and design competence (architecture) by both experts and students. Results of student focus group evaluation were analyzed using N-Vivo. Sixty-six promotion programs, of quality suitable for publication as determined by the two teaching faculties, were developed and used during Australia's Oral Health Awareness Week. Students reported confidence in learning design skills and understanding audience demographics and text literacy. Although they found self-directed learning motivated effort, they requested

allocated communication time with international consultants and assistance with occasional problems of group dynamics. The interprofessional online learning project is an authentic action-based learning program which successfully enables dental students to understand and use graphic media effectively in oral health promotion.

Keywords: *dental caries, oral health promotion*

Depressive symptoms in university: A cross-sectional study with Portuguese Students

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Depression is one of the most common and devastating mental health problems among higher education students. The aim of the present study was to assess depression levels and to investigate the association of socio-demographic variables with depressive symptoms in Portuguese university students. A total of 666 subjects completed the Portuguese version of University Student Depression Inventory (USDI; Khawaja & Bryden, 2006) and answered a group of questions regarding socio-demographic data. Statistical analysis consisted mainly of mean comparisons between groups and correlations. The results showed that 11% of students suffered from mild levels of depression and 4% of moderate or severe levels. When demographic factors were considered, females presented more depressive symptoms than men. No differences were found between those who left home and those still at home or between first year and following year students. A negative association between the perception of academic achievement and depressive symptoms was found. These findings may help define vulnerable groups and therefore guide the development of prevention and mental health promotion initiatives in campuses.

Keywords: *depression, academic achievement, mental health promotion*

Detached concern and burnout

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In the field of nursing for the elderly empathy is one key issue for optimal service quality. However, too much of it constitutes an intense emotional burden for helpers. Helping relationships are characterized by high emotional demands, which play an important role in developing burnout (Maslach, 1978, 1982). Detachment might be an important factor in dealing with these emotional stressors. Yet too much emotional distance has negative consequences for performing effectively in the job. A sense of Detached Concern (Lief & Fox, 1963) is required, which means a professional balanced attitude at work with clients characterized by emotional distance on the one hand and genuine concern on the other hand. Up to date rarely any empirical support for the relationship between Detached Concern and burnout as well as workers' well-being is available, in spite of the theoretical fact that Detached Concern is described as a meaningful coping strategy (Le Blanc et al., 2007; Maslach, 1978, 1993; Maslach, Schaufeli & Leiter, 2001; Schaufeli & Enzmann, 1998). Based on theoretical considerations and results of 16 qualitative interviews, a scale was designed to measure Detached Concern because established instruments do not exist. Three hundred and ninety-one employees in elderly care were surveyed using self-reported questionnaires. The psychometric quality of the generated scale was examined. Exploratory and confirmatory factor analyses were conducted for the factor structure. Path diagrams and one-way ANOVAs were applied to investigate the relationship of Detached Concern and burnout. First results show very good reliability and construct validity of the generated scale. Exploratory analyses indicated two factors. Confirmatory analyses supported the two-factor-structure. Based on different levels of Detachment and Concern four types of Detached Concern were derived. Successful Detached Concern was associated with significantly lower levels of exhaustion and depersonalization, significantly higher levels of personal accomplishment and significantly better health-indicators. Presented first results indicate the significance of Detached Concern in the context of burnout. More research into the

concept of Detached Concern could be worthwhile and have practical value for preventing people in human service professions from falling victim to chronic emotional burden.

Keywords: *Burnout, Emotional burden, Elderly empathy, Helpers, Detached concern*

Developing argument evaluation skills with the Reason!Able software in senior psychology students

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The aim of the study was to develop in psychology undergraduate students abilities related to argument evaluation, one of the most valuable critical thinking skills (CTS) in sciences such as Psychology. Participants were 50 senior psychology students from two research seminars related to special education in educational psychology. Participants completed Argument Evaluation Test (Version CT7; Stanovich, K. E., & West, R. F., 1997). This test contains 23 statements about informal arguments that students must to answer using a four-point Likert scale. It also contains the Evaluation of Counter-Arguments Questionnaire, which measures the ability to evaluate counter-arguments. Participants also used the stand-alone Windows-based program, Reason!Able. In this program, students are guided through the complex processes involved in representing and evaluating reasoning on any topic. The program covers two abilities: critical evaluation and argument production (Gelder, 2001). The current study was based on an explicative study founded in an experimental design. Participants were allocated to one of two groups (25 per group). The experimental group was trained to use the Reason!Able software and used the program while they worked on their thesis projects within a special education seminar. They were asked to argument and critically evaluate different topics covered in the special education needs subject as well as the research problems and objectives related to their dissertations. The control group did not use the software. Both groups completed the Argument Evaluation Test at the beginning and the end of the semester. Cronbach's alpha coefficients were obtained for both scales in the instrument,

Arguments (.75) and Counter-Arguments (.79). An independent samples t-test showed no significant statistical differences between means ($p \leq .134$) for both groups, experimental and control, in the pre-test. An independent samples t-test for shows significant differences between means ($p \leq .001$) for both groups, experimental and control, in the post-test. Working with Reason!Able software for one semester helped to develop arguments evaluation skills in senior students while they were using the program to evaluate their own dissertation arguments.

Keywords: *argument evaluation, critical thinking, reasoning*

Development and application of a class-related academic emotions questionnaire for college students

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The aim of this research was to develop a Class-related Academic Emotions Questionnaire (CAEQ) for college students, and to research the class-related academic emotions' characteristics of college students. The method combined theory with job analysis to develop a questionnaire, and the questionnaire was used with 585 college students (319 males and 266 females). A self-report instrument measuring college students' enjoyment, pride, hope, relief, anger, anxiety, shame, hopelessness and boredom was developed. The Cronbach α coefficients and test-retest stability coefficients of the sub-tests ranged from 0.61 to 0.82 and 0.50 to 0.79. Confirmatory factor analysis showed that the questionnaire had good construct validity (RMSEA = 0.068; NNFI = 0.92; CFI = 0.93). Correlations of sub-tests as well as with the Positive / Negative Affect Scale were moderately correlated. Through surveying 585 college students, this study explored the characteristics of class-related academic emotions of college students. The results showed that the means of seven sub-tests (except for anxiety and anger) were greater than the theoretical mid-value and the top four were positive emotions. In addition, significant effects of gender, grade and major in college students were found. Boys experienced more anxiety and boredom and less relief than girls. Students in

Grade One experienced more positive emotion than other grades; students in Grade Two experienced more negative emotion than other grades. Arts students had more positive emotion and less negative emotion than the specialties of Science, Engineering and Technology students. The CAEQ developed in the present study attained acceptable psychometric properties. College students experience diverse emotions in their academic career. Positive emotions were the major class-related academic emotion in Chinese college students.

Keywords: *positive emotion, negative emotion, class-related academic emotions, positive/negative affect scale, gender*

Development and validation of the Child Behaviour Assessment Instrument (CBAI)

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Behavioural abnormalities of children have grown to epidemic proportions and create a larger social and economic burden to society. Young children with behavioural problems are at a greater risk of developing psychiatric disorders in later life. These disorders have a good prognosis if treated at the onset and therefore should be identified early and referred for appropriate care. The aim of this study was to develop and validate a screening instrument to identify behavioural abnormalities of children aged 4 to 6 years in the community. Following systematic review of literature, 54 variables were identified. Three round Delphi technique was used to reach consensus in a panel of experts. Experts included paediatricians, child psychiatrists, child psychologists, community physicians, policy makers and service providers for children with behaviour abnormalities. The criterion validity and construct validity of the developed instrument was assessed in a community sample of 332 children aged 4 to 6 years. The reliability of the instrument was assessed by test-retest method and internal consistency analysis. Child Behaviour

Assessment Instrument (CBAI) containing 15 items was developed following the Delphi technique. The scoring method for CBAI based on the frequency of the problem behaviour, resulted in an area under the Receiving Operating Characteristic curve of 0.94 (95% Confidence Interval is 0.92-0.96). At cutoff of greater than or equal to 16, the sensitivity of CBAI is 88.52% and specificity is 81.54%. The mean score of children with behavioural abnormalities (21.37) was significantly higher than that of children with normal behaviour (7.040). The Cronbach's alpha exceeded Nunnally's criterion of 0.7 for items related to inattention, aggression and impaired social interaction. The Child Behaviour Assessment Instrument is a valid and reliable screening instrument to identify behavioural abnormalities of children aged 4 to 6 years in the community.

Keywords: community screening, behavioural abnormalities, child prognosis, child psychology, child assessment

Development of a formal examination of clinical psychology knowledge and skills

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Clinical training in psychology is in transition in Australia. The current system of a four-year undergraduate degree with two years of supervised practice permitting practice is transitioning towards one in which two years of formal training together with supervised practice and research will become standard. As part of the process of moving towards national registration of professional psychologists, a formal examination has been proposed for those graduates without at least a Master's level qualification to join the Australian Psychological Society's College of Clinical Psychologists, so that their experience can be recognised. Here we describe the format and developmental stages of this examination. The College of Clinical Psychologists of the Australian Psychological Society tendered for the development of a competency-based examination as part of the

process of alternative entry to the College. A consortium from five universities is in the process of developing this examination to comprise three components. A written examination will evaluate knowledge of the field; a second stage will assess complex case formulation, treatment planning, and higher-level analytic skills related to case management in its cultural and ethical context; a third in-vivo examination assesses applicants through a series of examination "stations" to evaluate the broad range of skills required for competent practice as a clinical psychologist, including assessment, formulation, treatment, process and ethical practice domains. The overall framework is based upon competencies in the domains of Theories and Knowledge, Assessment, Interventions, Research and Evaluation, Professional Practice and Non-psychological Components. A pool of multiple-choice items was derived from several sources, including existing item pools from commercial sources and teaching programs of the consortium. Case vignettes for the second and third stages were again derived from several sources, including existing teaching material and cases from the consortium's teaching clinics. A complex examination process has been developed in response to the request for a measure to evaluate critical clinical competencies of individuals' educational backgrounds that are not equivalent to conventional clinical training. Procedures planned to evaluate the validity of the examination include formal content analysis, together with criterion validity studies using graduates and senior students of existing training programs.

Keywords: clinical training, competency-based examination, psychology qualifications in Australia, entrance examination for Clinical College membership, competency domains of psychologists

Development of a Male Masking Behaviour Scale (MMBS)

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An existing body of literature (Brownhill, 2003; Cochran & Rabinowitz, 2000; Rutz, 1999) argues that gender differences exist in the way depressive symptoms are expressed, managed

and controlled. Conventional assessments of depression do not seem to target behavioral issues specific to men and as a result the extent to which these measures can specify gender differences in depressive symptoms is questionable. A review of the literature identified only one gender sensitive measure, but this measure was developed with a European sample, and has not been tested in an Australian context. The aim of the present study was to develop and validate a male masking behaviour scale that could indicate depressive symptoms in men. The development of the Male Masking Behaviour Scale (MMBS) was conducted in two phases. In Phase One, 101 items were generated based on seven categories identified in the literature. These items were assessed by a small group of Psychology experts ($N = 36$) to establish content and face validity. In phase two, the items were further refined and validated against other measures of depression such as the Depression, Anxiety and Stress Scale (DASS) and the Mini Mood and Anxiety Symptom Questionnaire (Mini MASQ) with 143 participants from the general population. A four factor structure obtained by a factor analysis of the data and the overall MMBS were found to have good reliability Alphas. Convergent validity of the MMBS was established with significant correlations between the MMBS, the DASS and the MiniMASQ. The results of this study did not support the seven broad categories initially identified in the literature (Brownhill, 2003; Cochran & Rabinowitz, 2000; Rutz, 1999). In examining the four factor structure of the MMBS it is evident that the seven categories have been collapsed into four factors measuring male masking behaviours. This study constitutes a first step, suggesting evidence of the construct validity of the MMBS. Further studies could validate the MMBS using a clinical sample and other cultural groups.

Keywords: *depression, male masking behaviour, anxiety, assessment of depression*

Development of gender personality in Japanese adults

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The aim of the present study is to investigate the development of gender personality in Japan. Participants include 768 Japanese adults (339 males and 427 females). The participants were divided into three age groups: young adults (20 to 25 years old; 77 males and 114 female university students), adults (25 to 46 years old: 198 mothers with young children), and older adults (57 to 81 years old; 262 males and 115 females). The participants were asked to fill out the Japanese Gender Role Index consisting of ten masculine and ten feminine items with ten non-gender items. There is no significant gender difference between young males and young females, whereas significant differences were found in both masculinity, $t(df = 357) = 4.60, p < .001$, and femininity, $t(df = 351) = 5.25, p < .001$, between older males and older females. Examinations of generational differences showed that male older adults scored significantly higher than young adults in both masculinity, $t(df = 329) = 12.57, p < .001$, and femininity, $t(df = 324) = 14.36, p < .001$, whereas female young adults scored significantly lower than adults and older adults in both masculinity, $F(2, 414) = 35.78, p < .001$, and femininity, $F(2, 413) = 81.58, p < .001$. The results of the present study are consistent with Block's model (1973) which postulates the association between personal maturity and the integration of masculine and feminine personality traits.

Keywords: *Japanese, masculinity, gender personality, personal maturity, generational differences*

Development of the test of Chinese employees' competency in private and foreign enterprise

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The purpose of this study is to develop a test of general employees' competency in private and foreign enterprise based on the competency model on technical, financial, marketing, administrative, service and managerial employees in private and foreign enterprise. The test of general employees' competency in private and foreign enterprise was developed based on the competency model, which was

conducted using document analysis. One thousand and sixty employees of private and foreign enterprise from different part of the country were assessed by the test. The test was composed of 105 items and 21 sub-scales, which were respectively named as communication skills, achievement oriented, learning capacity, client oriented, self-confidence, conscientiousness, initiative, professional dedication, ability to analyze and judge, ability to reason and abstract, integrity, innovation, relation establishing, influence power, insight into interpersonal relationship, organizing and coordinating ability, team work spirit, encouraging capacity, executive ability, planning capacity and so on. Reliability analyses, confirmatory factor analyses and correlation analyses showed the reliability and validity of the scale achieved the psychometric criterion. The difference of the test scores between excellent performance group and common performance group was significant. The reliability and validity of the test are strongly supported. The test could be effective to identify excellent employees and could be an effective tool for staff selection, training and performance appraisal.

Keywords: staff selection, employee competency, group performance, staff training, performance appraisal

Diagnostic accuracy of the Child Behavior Checklist for externalizing and internalizing disorders in Asian children and adolescents

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Recent research advocates an integration of categorical and dimensional approaches, and a multi-informant approach, to the diagnosis of childhood mental disorders. In view of this, the present study sought to examine the diagnostic accuracy of Achenbach's parent-rated Child Behavior Checklist (CBCL) for clinician-diagnosed externalizing and internalizing psychopathology, as well as for specific childhood mental disorders, namely Attention-Deficit/Hyperactivity Disorder (ADHD),

Oppositional Defiant Disorder/Conduct Disorder (ODD/CD), anxiety disorders and depression. Upon receiving ethics approval, cross-sectional data was obtained from case files of 1,000 Singaporean children and adolescents who received treatment at a mental health institution in Singapore. These children range from 4 to 18 years of age. Using data gathered from completed CBCL forms, two broad-band scales (Externalizing and Internalizing) and three narrow-band syndrome scales (Attention Problems, Delinquent Behavior, and Anxious/Depressed) were selected for analysis. On a broad-band level, CBCL Externalizing and Internalizing scales were shown to differentially predict clinician-diagnosed externalizing and internalizing disorders respectively. On a narrow-band level, CBCL Attention Problems, Delinquent Behavior, and Anxious/Depressed scales differentially predicted ADHD, ODD/CD, anxiety disorders and depression respectively. In demonstrating the diagnostic accuracy of the CBCL, study findings illustrate that parent-rated CBCL scales possess the ability to discriminate among various clinician-diagnosed disorders. This supports a multi-informant approach to clinical diagnosis, which involves not only clinicians, but also parents and others who interact frequently with the child and are able to provide important perspectives on the child's behavioral and emotional problems. Additionally, results suggest that a dimensional approach to clinical diagnosis complements a categorical approach as the former provides valuable insight into the severity of a child's problems. Diagnostic accuracy of the CBCL on both broad-band and narrow-band levels also support the reliability and robustness of the CBCL as a rating scale in its totality.

Keywords: diagnosis of childhood mental disorders, externalizing and internalizing psychopathology, attention deficit hyperactivity disorder, dimensional approach to clinical diagnosis, Achenbach's parent-rated Child Behavior Checklist

Dialectic behaviour therapy (DBT) with torture and trauma clients at The New South Wales Service for the Treatment and Rehabilitation of Torture and Trauma Survivors (STARTTS): A case study

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This case study elaborates on Dialectical Behaviour Therapy (DBT) that was implemented in a treatment of a female client from Sierra Leone who had been experiencing symptoms of Post Traumatic Stress Disorder (PTSD) and dealing with suicidal thoughts. Treatment was conducted at the New South Wales, Service for the Treatment and Rehabilitation of Torture and Trauma Survivors (STARTTS). The assessment included Harvard (PTSD 2.20) and Hopkins (Anxiety 3.80, Depression 2.53) Checklists and PTSD (3.00) questionnaire. As the client was highly symptomatic, DBT was utilized in order to reduce the symptoms and improve her mental health condition. DBT has a number of distinctive defining characteristics. As its name suggests, its overriding characteristic is an emphasis on "dialectics" - that is, the reconciliation of opposites in a continual process of synthesis. The most fundamental dialectic is the necessity of accepting the client just as she is within a context of trying to teach her to change. The assessment included Harvard (PTSD 2.20 reduced to 0.80) and Hopkins (Anxiety 3.80 reduced to 0.50, Depression 2.53 reduced to 0.40) Checklists and PTSD (3.00 reduced to 0.20) questionnaire. DBT has been utilised in a form of cognitive-behavioural therapy, in order to help the client to learn problem-solving techniques for dealing with stressful experiences in her life. It appeared important for the client to improve social skills and control anger and depression. As the client experienced multiple psychological, physical and sexual traumas and losses in her country of origin, her Autonomic Nervous System (ANS) reacted excessively to stressful stimuli and it took her a long time to achieve homeostasis. DBT helped the client address multiple traumas and suicidal thoughts by utilising the following DBT aspects: a) Mindfulness, b) Emotional Regulation, c) Distress Tolerance, and d) Interpersonal Relationships.

Keywords: *torture survivors, dialectical behaviour therapy, multiple trauma, trauma*

Dialysis patients' self-esteem and social anxiety

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The great progress that has been made in the application of dialysis lets patients with end-stage renal disease live in satisfactory somatic states for many years. Patients' well-being becomes a raised question more and more often. The main aim of the presented study was to compare self-esteem and social functioning of dialysis patients to people from general population. The study was a randomized controlled trial using a convenience sample of 102 fully informed and consenting patients with end-stage renal disease and 102 people from general population. The instruments comprised of the Self-Esteem Inventory and Social Contact Inventory. The results show that there are differences between dialysis patients and the general population in the case of Physical Self-esteem and Acting/Task Self-esteem. Dialysis patients' Physical Self-esteem ($M = 10.26$) is lower than healthy peoples' Physical Self-esteem ($M = 13$); $t(101) = -5.56, p < .001$. Dialysis patients' Acting/Task Self-esteem ($M = 19.87$) is lower than healthy peoples' Acting/Task Self-esteem ($M = 21.55$); $t(101) = -2.89, p = .004$. There are not any differences in case of Social Self-esteem $t(101) = .30, p = .77$ and Emotional Self-esteem $t(101) = .38, p = .71$. There is not any difference in the case of Social Anxiety $t(101) = -1.27, p = .21$. On the basis of the presented study it is possible to claim that there are some differences between dialysis patients and general population as far as self-esteem is concerned. There is no difference in case of social anxiety. This research shows that dialysis patients need some psychological support, but generally their social adjustment level is quite good.

Keywords: *well-being, self-esteem, social functioning, dialysis patients, somatic state*

Differences between Chinese and New Zealand Students: The impact of the statistical method

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The aim of this research was to compare the impact of statistical techniques on measurements of Collectivism and Individualism. Attributes of Collectivism and Individualism (using the Auckland Individualism and Collectivism Scale) were compared across undergraduate students from Mainland China ($n = 172$) and New Zealand ($n = 210$). Two statistical techniques (T-Test and k-mean cluster analysis) were used to compare the samples and establish the differences in the results. The mean scores on both Collectivism and Individualism of the Chinese sample were lower than those of the European New Zealanders (3.35 versus 3.94 and 3.47 versus 4.33 accordingly, $p < .001$). This result does not indicate which population is more collectivist or individualist than the other. The k-mean cluster analysis found that among the Chinese sample, 41% identified as collectivist and 24% were individualist whereas among the New Zealanders, 37% were individualist and 22% were collectivist ($p < .0001$). It is noteworthy that among the Chinese 30% had high scores and 5% had low scores on both collectivism and individualism whereas among the New Zealanders this trend was reversed (4% and 37% respectively). In conclusion, cluster analysis may provide important information which cannot be yielded from t-tests when psychological attributes (in this case within cultural contexts) are compared across different populations, particularly when the measures are constructed by more than one factor/domain. Cluster analysis may provide some mitigation for biases relating to culture and/or language differences, for example, the tendency to use the low or the high end of the scale.

Keywords: *collectivism, individualism, psychological attributes, cultural context, cluster analysis*

Differences between values and behaviors among diverse undergraduate students

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Studies have highlighted differences in the reports of values and behaviours across cultures,

with studies of acculturation frequently exploring how those values and behaviours change over time when people enter a new cultural context. As values and behaviours change, particularly across generations, dissonance may arise as there are discrepancies between self-reported values and behaviours. The current study examines how differences between ratings of values and behaviours contribute to psychological distress in a sample of diverse young adults. The current study surveyed undergraduate university students (840 females, 328 males) with a mean age of 18.9 ($SD = 2.3$) and included 714 Whites, 196 Asian-Americans, 172 Latinos, and 84 African-Americans. Participants completed Matsumoto's Individualism-Collectivism Interpersonal Assessment Inventory (ICIAI) and the 58-item Hopkins Symptom Checklist (HSCL) along with demographic information and reports of discrimination in the past year on the General Ethnic Discrimination (GED) scale. Difference scores were calculated to assess discrepancies in individual ratings of their values and behaviours with family members on the 19 items on the ICIAI and four subscales (social harmony, social identification, self-control, and social sharing of recognition). There were significant group differences for all subscales on the ICIAI, except for the behavioural self-control subscale; with Asian-American students consistently reporting higher scores (greater collectivism) for each of the subscales. Regression analyses controlling for age ($b = -.863$, $p < .05$), gender ($b = -5.760$, $p < .01$), and reports of discrimination in the past year ($b = .633$, $p < .001$), found that differences between self-reported values and behaviours on the ICIAI significantly predicted ($b = .446$, $p < .001$) total scores of symptomatology on the HSCL-58. The current findings replicate prior research which has found cross-cultural differences in reports of values and behaviours. Moreover, it underscores the importance of dissonance among young adults, during an important time of identity development and has implications for future research on intergenerational conflict and the processes of acculturation. Discussion of the limitations of the research and recommendations for further inquiry is provided.

Keywords: *values, psychological distress, acculturation, young people*

Differences in Japanese mothers' touch by nurturing scene: Focusing on playing, crying, feeding and putting infants to sleep

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The purpose of this study was to examine whether maternal touch of four-month-old infants by Japanese mothers differs depending on four nurturing scenes: playing, crying, feeding, and putting infants to sleep. We carried out a questionnaire survey using the Japanese Touch Rating Scale with 901 mothers of four-month-old infants. Based on the findings of three preliminary research studies, we established 19 categories of touch (touching, stroking, rubbing, holding up infant's hands or feet, waving infant's hands or feet, patting, poking, tickling, picking infant up, changing infant's position, quietly swaying, shaking, holding infant's hands or feet affectionately, massaging, pinching, kissing, holding, hugging, and supporting infant's body) and four nurturing scenes (playing, crying, feeding, and putting infants to sleep). Participants were asked to evaluate on a five-point scale the frequency of the 19 categories of touch in the four nurturing scenes and the mean scores for each were calculated. The data were analyzed using a 4×19 Kruskal-Wallis test. The main effect of nurturing scene was found to be significant. The factor of nurturing scene was then evaluated with the Mann-Whitney U test for multiple comparisons. The major results were as follows: in the playing scene, mothers used significantly more frequent maternal touch categories of touching, stroking, rubbing, holding up infant's hands or feet, waving infant's hands or feet, poking, tickling, shaking, holding infant's hands and feet affectionately, massaging, pinching, kissing, and supporting infant's body than in the three other nurturing scenes. In the playing scenes, mothers used various kind of touch in order to draw the infant's smile to please infant. Thus, maternal touch of young infants shows different characteristics for each of the four nurturing scenes, suggesting that maternal touch can be functionally used depending on the nurturing scene.

Keywords: *maternal touch, nurturing scenes, Japanese Touch Rating Scale, mother-infant interaction*

Different video game playing habits related to attentional function

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Previous studies suggest that playing video games improves attentional functions (Green et al., 2006). However, it may be considered that different video game play habits such as frequency, playing time and types of games would lead to differential development of attentional functions in their players. In this study, we examined whether attentional functions differ depending on different types of video games engaged at different ages with questionnaires including the one that purported to measure attentional functions. Questionnaire data were collected from a total of 300 participants (191 men, 109 women). All participants were undergraduate and graduate students, aged 18 to 25. Questionnaires were composed of two domains. One domain asked about video game play habits, such as frequency, hours of playing, preferred types of games and game career. The other domain measured individual characteristics related to attention related functions with Attentional Function Scales, Attentional Effort Scale (measuring ability to exert active attentional control over attentional concentration and sustained attention), Cognitive Failure Questionnaire (CFQ; Broadbent et al., 1982, measuring ability related to traffic accident tendency), Barratt Impulsiveness Scale Version 11 (BIS-11; Patton et al., 1995), Thought Occurrence Questionnaire (TOQ; Sarason et al., 1986) and Boredom Proneness Scale (BP; Farmer et al., 1986). First, based on frequency of playing video games within the past six months, we divided participants into three groups: high frequency video game player group (HVGP), low frequency video game player group (LVGP) and no video game player group (NVGP). It was found that HVGP were more hyperactive (being impulsive and prone to boredom) and poor in active control (such as low abilities of attentional switching and attentional efforts) than LVGP and NVGP. Furthermore, it was found that the

differences of the age when participants got most involved in their video games were associated with attentional abilities in HVGP. Participants who got most involved in them in middle adolescence (high school) were higher in impulsiveness and weaker in attentional efforts, but participants who got most involved in childhood (elementary school) were lower in impulsiveness and stronger in attentional efforts. We conclude that playing different types of video games during development is related to attentional functions. Participants who currently played video games intensively were more hyperactive and poor in active control. Furthermore, particularly those participants (HVGP) who became involved in video games in middle adolescent were higher in impulsiveness and weaker in attentional efforts. In contrast, participants who played them during childhood were lower in impulsiveness and stronger in attentional efforts. Although it is not possible to explain these results in terms of direct cause and effect between these factors, they suggest that video game play habits affect people's attentional functions differently depending on the age of most active involvement.

Keywords: *video game playing, Attentional Function Scale, Attentional Effort Scale, Cognitive Failure Questionnaire, impulsivity*

Differential effects of practice on the dissimilar cognitive attribute processes used for truthful and deceptive responses: An event-related brain potential study

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The aim of this research was to provide some suggestions for how to choose and organize stimuli efficiently during the deception detection. Event-related potentials (ERP) and Behavior were recorded while participants made truthful and deceptive responses about the Chinese sentence which forms subert-six words and the photographs. The 700 Chinese sentences were labeled equably as three sorts: (1) self identity (birthday, homeplace, the twelve Earthly Branches, stature, shoes size etc; and self related information: self parents name, placenames which the participant have been to sometimes ago, etc. (2) unrelated date, name,

placenames etc, which parallel to 1 and never heard of before; (3) proverbial knowledge: a name of mark, well-known placenames etcetera. Two hundred and ten photographs were labeled equably into three sorts as Chinese sentences. The two pressing the reactor' keystroke methods, (1) changelessness: mouse leftward keystroke is "yes"; rightward is "no", (2) appointment: in conformity to the screen in the underside left "yes" or right "yes" and right "no" or left "no". One hundred participants took part in the series experiment. ERP was recorded in the series experiment using the Neuroscan 4.3 system with 64 scalp electrodes in standard 10 to 20 placement. The deceptive response, compared to the honest response, was longer in reaction time and lower in the correction rate, the ERP amplitude evoked was smaller while the ERP amplitude evoked by strange-ID information was smaller than that of self-ID information in the interval of 550 to 800 milliseconds. The difference in terms of ERP amplitude on the left brain was greater than that on the right brain. In conclusion, 1. The left brain may be more involved in the process of deceptive response. So choosing the ERP data from the left brain for analysis will be better able to identify the deceptive response. 2. The executive control process existed in the deceptive response may consume more psychological resources, which makes the psychological resources used in the information processing decrease. These mentioned above may be the reason why the ERP data between the deceptive and honest response is different. 3. Chinese sentences can be used as effective stimuli material in the deception detection with ERPs.

Keywords: *event-related potential, deception detection, Chinese sentences*

Difficulties in facial emotion recognition in post-traumatic stress disorder

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Individuals with Post-Traumatic Stress Disorder (PTSD) tend to attribute more negativity towards threatening (negative) stimuli. The purpose of this study is to examine processing of facial emotions in a sample of PTSD patients. By using a Morphed Facial Emotion Identification Task,

we aim to investigate emotional sensitivity of sexual abuse victims on their accuracy. Individuals with PTSD have been associated with atypical processing of emotion. According to Litz's advanced network model, Trauma cues prime fear-related information processing, which in turn temporarily inhibit the ability to experience emotions of incompatible valence (e.g. positive affect). However, research has provided little evidence indicating how sexual abuse victims' processing of emotion might vary with the valence. Participants will include a diverse sample of PTSD patients (PTSD group, $n = 15$) and those with no history of abuse (Control group, $n = 15$). Prior to the task, the participants will rate the affective and arousal valence of the facial emotion expression stimuli. Participants' reaction times and labeling of emotions (Happy, Neutral, Fearful) will be measured using a Morphed Facial Emotion Identification Task by identifying facial expressions morphed from neutral to maximum intensity. They will then complete various self-rating scales designed to assess impulsiveness, post-traumatic stress symptoms, depression, and anxiety. This study is currently in progress. It is expected that, the PTSD group will display faster reaction times than the control group when labeling emotional facial expression and will correctly identify facial affect at an earlier stage, and this result will be most pronounced for fearful faces. In contrast, the PTSD group will show slower reaction times and correctly categorize facial emotion at a later stage for happy faces. These results will demonstrate that participants with PTSD are more sensitive for fearful faces, but less responsive for happy faces than controls in identifying emotional expressions. This is an empirical study to investigate the mechanism of processing facial emotions in a sample of PTSD individuals. The predicted results may provide valuable information in understanding the impact of PTSD on social-cognitive processing and assist in the development of possible treatment solutions for PTSD patients.

Keywords: Morphed Facial Emotion Identification Task, processing of emotion, post-traumatic stress disorder, fear-related information processing, facial emotion expression stimuli

Dimension or category? A taxometric analysis of social phobia

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Social phobia, characterised by a fear of negative evaluation or embarrassment, is a prevalent disorder in community and clinical samples. It has an early onset and chronic course and is associated with negative psychosocial outcomes and co-morbid disorder. Current categorical conceptualisations of social phobia lack empirical support. The aim of the current study is to explore the latent structure of social phobia to determine whether "social phobia" reflects a discrete and qualitatively different condition, or alternately, whether all people experience a degree of social phobia. Data from two large scale community surveys in Australia (National Survey of Mental Health and Wellbeing (NSMHWB), 1997) and the United States (National Comorbidity Survey – Replication: NCS-R) were used. In both samples, a subsample of respondents screening into the Composite International Diagnostic Interview social phobia section were selected for analyses. Three mathematically distinct taxometric procedures (MAXEIG, MAMBAC and LMode) were used, along with various consistency tests. Indicators for analyses were constructed using current DSM-IV social phobia diagnostic criteria and personality factors (e.g., neuroticism) reported to be related to social phobia. A majority of analyses in both samples supported dimensional structure of social phobia. A MAXEIG analysis in the NSMHWB sample identified a small peak which identified a potential small-base rate taxon; however, this was not observed in the NCS-R sample. These results are consistent with a growing body of evidence supporting dimensionality of social phobia. Support for dimensional structure of social phobia has important implications for assessment, diagnosis, measurement and treatment. Dimensionality supports using assessment measures focusing on the degree of social phobia symptoms experienced and levels of meaningful change following treatment. Dimensionality also supports using statistical methods such as factor analysis and item response theory models. Applying dimensional models for psychopathology has important implications for public policy and early intervention.

Keywords: *social phobia, dimensionality, categorical conceptualisations*

Disadvantage and prosocial behavior: The effects of the Wenchuan earthquake

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The evolution of prosocial behavior is one of the most compelling puzzles facing scientists. An earlier study showed that being at a territorial disadvantage promoted children's prosocial behavior. The May 12, 2008 Chinese earthquake of 8.0 magnitude on the Richter scale placed residents in devastated areas in a disadvantaged position. We conducted three sequential surveys to test our hypothesis that residential devastation would evoke more prosocial behavior. A total of 8,023 residents in three non-devastated areas (the Tangshan area in Hebei Province, Fujian Province and Beijing City) and two devastated areas (Sichuan Province and Gansu Province) participated in the post-earthquake surveys. All participants were recruited by going door to door and asking people to take a survey, and all were given a small present (such as a bar of soap, a towel, or a packet of washing powder) in return for their participation. As expected, the results revealed that the degree of prosocial behavior increased with an increasing level of residential devastation, but decreased with the passage of time. However, we also found evidence that a catastrophic disaster leaves a long-lasting effect on prosocial behavior. The results supported our hypothesis that prosocial behavior could be induced by individuals being at a disadvantage. These findings should improve the conceptual understanding of the origin of prosocial behavior.

Keywords: *prosocial behaviour, residential devastation, catastrophic disaster, individuals being at a disadvantage, prosocial behaviour*

Discrimination against older workers: The role of implicit attitudes

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Negative attitudes and discriminatory practices towards older workers are well documented. However, the role that implicit attitudes may play in such discrimination has not previously been explored. The objective of the present research was to investigate implicit ageism in an employment context. Implicit and explicit attitudes towards older workers were measured, and a mental imagery exercise was used to investigate the malleability of bias. The relationship between attitudes and behaviour toward a younger and an older worker was investigated in an employment interview exercise. Negative implicit bias against older relative to younger workers was found. There was some evidence for the effectiveness of mental imagery in alleviating such bias. The explicit attitudes were relatively positive and influenced by the mental imagery. The results also showed some evidence of youth bias in the interview situation. The present research showed that negative implicit attitudes exist towards older workers. The implications for both older workers and employers are highlighted in the context of the ageing workforce.

Keywords: *ageism, attitudes, negative implicit bias*

Diversity in Community Mass Syndrome (CMS): Evidence based analysis

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Mass psychogenic illness is characterized by symptoms, occurring among a group of persons with shared beliefs regarding those symptoms, that suggest organic illness but have no identifiable environmental cause and little clinical or laboratory evidence of disease (Am Fam, 2000). Community Mass Syndrome (CMS) is being interpreted as normal behavior where hundreds to millions of people of more or less the same community with the same beliefs are motivated towards a certain type of behavior acceptable in the society with one, or more than

one, common goals (Singh, 2005). The Community Mass Syndrome (CMS) was first reported in the fifteenth century as "Tarantism" in the context of normal behavior in Germany, and in the rest of Europe it was known as St. Vitus's dance. The behavior was similar to the ancient orgiastic rites where people worshipped the Greek God Dionysus. These rites had been banned with the advancement of other religions, but they were deeply embedded in the culture and were apparently kept alive in secret gatherings. With time, the meaning of dance changed so that the participants were no longer sinners and dance became a source of "cure". The CMS became the undefined method of catharsis, relaxation, in some cases cure, and a means of mental hygiene. The aim of the present evidence-based study is to explore, analyze and classify CMS including its symptoms, types, geographical expansion and diversity. The method adopted for this study is evidence based analysis focusing on symptoms, history, etiology, types and outcome. The historical evidence is collected from the twelfth century to twentieth century. The present analysis examines the origin, history, geographical area, age, gender, duration and behavioral differences in the diversity of CMS. The results indicated that diversity in CMS occurs, and with time some symptoms have been added or eliminated and thus diversifying its form, from psychogenic illness to religious form to political form to commercial form etc. The CMS is classified in religious, political, commercial and undifferentiated types. The feast of fools was a very popular medieval celebration for Roman Catholics. World Youth Day has a young history of twenty years in Europe. Since twelfth century in Hajj hundreds of thousands of Muslim pilgrims participate in Mecca, Saudi Arabia. The carnival tradition still flourishes in Belgium, Italy, France, and West Germany. In the Western Hemisphere, the principal carnivals are those of a commercial nature in Rio de Janeiro and the Mardi Gras in New Orleans. The Sydney Gay and Lesbian Mardi Gras (SGLMG) is a unique Australian festival. It is a party of the rarest and most uninhibited kind and it is the single largest night-time parade of its kind in the world. The fall of the Berlin Wall, the non-cooperation movement in India, and the Bloody Sunday of the Russia Romanian Revolution are evidence based examples of political CMS. All exhibit behavior in mass which

was otherwise abandoned in community or society. This evidence based study concludes that there is diversity in CMS and further meta-analyses and research are required for psychosocial, cultural, political, commercial and religious mega events.

Keywords: community mass syndrome, community behaviour, mass psychogenic illness, dance, historical evidence of mass gatherings

Do foils safeguard against false identification decisions? Comparing choosing and accuracy rates in simultaneous lineups and showups

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There has been much discussion about which lineup procedure (simultaneous vs. sequential vs. showups) is most suited to finding the guilty while at the same time protecting the innocent. The arguments made mostly rely on the relative-absolute judgement model (Wells et al., 1984). In the present study, 384 participants watched a videotaped staged theft of a wallet. Thirty minutes later they were asked to make an identification from a target present (TP) or target absent (TA) lineup. Four identifications were made in total, one of the suspect, one of the victim and one for each of two bystanders. For half of the participants, the lineups presented were showups, for half simultaneous, six-person-lineups. For each participant, two identifications were presented as TA and two as TP. It has been argued that a showup creates unreasonably high risk that an innocent suspect will be chosen. For this reason, a suspect is always to be presented in the context of a number of foils, that is, fillers who are known to be innocent. According to Gonzales et al. (1993), eyewitnesses express greater caution because of the presence of foils in the lineup. However, recent findings (Stebly et al., 2003) indicate that there are lower choosing rates in showups compared to simultaneous and sequential lineups, which is consistent with the idea that the similarity structure of a lineup created by the addition of foils might affect criterion placement. Consistent with this idea, our preliminary results show that the choosing rates in showups are much lower for both TA (16% vs

62%) and TP (33% vs. 70%) lineups. The results will be discussed with regard to lineup administration and the need for filler persons.

Keywords: *lineup procedure, showups, sequential lineups, simultaneous lineups*

Does cognitive fitness training work?

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One determinant of healthy ageing is cognitive capacity. Several programs have recently been designed to promote cognitive fitness. The aim of the current study was to conduct an independent appraisal of one of these programs to determine whether it is beneficial and, if so, for which subgroups of participants. Participants' performance on a range of tasks was measured in a 45-minute baseline assessment prior to an individualized program of exercises being set. Participation then required 20 minutes of training three times per week. Measures of performance were then taken at three further points. Slightly more women than men participated in the program. Participants' average age was 64 years. Two-thirds were highly educated. The majority had no health problems and used a computer daily. Over 1800 participants commenced the program, but by Time Three, only 423 remained. Significant overall group differences in performance on the tasks were observed. Women performed better than men on several tasks, and good health, tertiary education, computer experience, and being younger rather than older all promoted high performance. Performance on all measures improved significantly over the course of the training. The greatest improvements were noted for Visuomotor coordination and Short-term memory. Women improved more than men on both of these tasks. However, Reaction time improved most for people with serious health problems and those with low levels of education. Multivariate analysis of attrition showed that persisting with the program varied by age, health, and education, and both with performance at Baseline and with improvements over time. Overall, the program resulted in significant improvements with training in all domains, especially for participants with low

levels of initial performance. However, whether the cognitive gains shown in training generalize to everyday performance is not known. Success in the initial stages of the program led to improved retention, highlighting the importance of a sense of achievement for persisting with training.

Keywords: *cognitive fitness, healthy ageing, visuo-motor coordination*

Does emotional intelligence influence employees' job outcomes? Some evidence from the Indian information technology industry

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The present study examines the influence of emotional intelligence on employees' job outcomes (job performance and job satisfaction) in the Indian Information Technology (IT) industry. The study also investigates the relationships among emotional intelligence, stress and coping of IT professionals. The study was conducted on a sample of 126 young executives randomly selected from a group of IT companies located in the Kolkata metro city of India. The findings of the study revealed that emotional intelligence positively correlates with job outcome variables and executives coping. Regression analysis was used to observe the effects of Emotional intelligence on job outcome variables. Based on the results, detailed theoretical and practical implications of the findings are discussed.

Keywords: *emotional intelligence, stress, job satisfaction, job performance, executive coping*

Does human resource management (HRM) really matter in tourism organizations? Strength of HRM systems from a managerial perspective

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Strategic Human Resource Management (HRM) directs attention to the ways in which the HRM system is critical to organisational effectiveness. Several authors have urged scholars and managers to devote time and efforts to understand the associations between HRM and organizational performance (Becker and Gerhart, 1996). Bowen and Ostroff (2004) responded to this plea, and introduced the concept of strong HR systems. In such systems, messages regarding what is appropriate behaviour are communicated to employees in an unambiguous and consensual way. Hence, HR systems must possess a set of unique features, which relate to the process by which a consistent message about HR content is sent to employees. HR strength affects the way people interpret their surrounding environment, that is, the situation strength. Stronger HR systems lead to stronger situations, and weaker HR systems lead to weaker situations. Based on seven semi-structured interviews to HR managers in hotels, we explored the attributes which make a HRM System strong or weak. Data was compared with the theoretical propositions of Bowen and Ostroff, and results offer some insights regarding each of the attributes put forward by authors. We observed that none of the constructs seem to be part of the agendas of the HR function. The attributes which were less supported were: understandability, validity and justice. Implications are drawn in respect to the way HR communicates with employees.

Keywords: human resources, management, organizational performance, organizational communication, employees

Does job, organization, procedure or interviewer really matter? Testing the mediating mechanisms of multiple fit perceptions on applicant attraction within a field interview context

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To realize how applicant reaction mechanisms affect organizational attractiveness and applicant job choice, the present study tests the

effects of four important factors (i.e., job relevant attributes, organizational attributes, applicant perceived fairness, and interviewer behavior) and the mediating roles of multiple applicant fit perceptions in a field interview setting. Data were collected from 289 applicants participating in job interviews. The participants were invited to complete questionnaires after their interviews. In order to prevent the concerns of social desirability effects, the true purpose of the research was undisclosed and all participants were told that the results would be used only for research purpose and unrelated to the final results of the job interview. The results of structural equation modeling showed that organizational attributes were positively related to organizational attractiveness. Applicant-job fit fully mediated the relationship between job attributes and organizational attractiveness. Applicant-organization fit mediated the effects of perceived procedural justice and interviewer ingratiation behavior on attractiveness. Moreover, the results also indicated a positive relationship between applicant received job offers and attraction. Building on previous research findings on organizational attractiveness, the present study simultaneously tested the mediating roles of applicant-job, applicant-organization, and applicant-interviewer fit within a field interview setting. With regard to the current results, organizations may consider to utilize their recruitment efforts and applicant perceived attractiveness through enhancing positive images, providing job related information and assigning well-trained interviewer in the recruitment process to strengthen different important applicant fit perceptions.

Keywords: organisational attributes, organisational attractiveness, applicant job choice, job interviews, recruitment process

Does task type affect the efficacy of performance goals: A comparison of discovery and instruction-based skill acquisition

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A growing body of research from the cognitive domain has suggested that performance goals impair the acquisition of cognitive skill due to

their inhibitive effect on systematic task exploration. This research however has typically employed complex control tasks where skill acquisition is dependent on discovery-based learning. The present research sought to determine whether performance goals resulted in poorer skill acquisitions under instruction-based skill acquisition. Eighty two undergraduate psychology students' were instructed to perform the Kanfer-Ackerman Air Traffic Control task under one of four conditions in a 2x2 design. Participants were either given performance or exploration goals coupled with specific or non-specific feedback. Results suggested that performance goals and specific feedback were more beneficial for both task acquisition and transfer performance under learning from instruction conditions, contrary to the predictions of a number of cognitive theories of skill acquisition. It appears that performance goals can be effective in facilitating skill acquisition under instruction-based learning.

Keywords: skill acquisition, instruction-based learning, feedback, performance goals, cognitive research

Does the importance and the achievement of entrepreneurial success criteria vary across cultures and genders?

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Entrepreneurial success is considered to include multiple criteria of a financial, non-financial, social and psychological nature. Previous studies reported women attach higher importance to socio-emotional aspects of success such as workplace relations and community impact. At the same time, women were found to be less successful in terms of objective success criteria including growth and financial performance. The present study introduces culture as an essential variable to extend our understanding of gender differences in entrepreneurial success. We hypothesized that gender differences in importance and achievement of success criteria will be more pronounced in a culture of low gender equality (Germany) than in a culture with

high gender equality. Self-developed scales measuring importance and achievement of success criteria were distributed to 184 German (women $n = 46$) and 70 Polish entrepreneurs (women $n = 31$). Underlying structure of importance and achievement was established using structural equation modelling, while cultural and gender differences were analysed using parametric statistical tests. Confirmatory factor analyses revealed a five-factor solution for both importance and achievement ratings. Importance consisted of personal fulfilment, workplace relations, community impact, personal rewards and company performance, while achievement included financial outcomes, personal balance, dynamism/growth, workplace relationships and community impact. Polish entrepreneurs scored significantly higher on the importance of personal rewards ($p < .001$) and evaluated themselves to be less successful compared with their German counterparts. More precisely they reported lower achievement on workplace relations ($p < .001$), dynamism/growth ($p = .03$) and community impact ($p = .05$). In line with our hypothesis that gender differences will be more pronounced in a culture of low gender equality, German females attached significantly higher importance to community impact ($p = .04$) compared with males. Additionally they scored higher on this success criterion ($p = .02$) and workplace relations ($p = .04$), however lower on the total success achievement. Interestingly, Polish female entrepreneurs attached lower importance to workplace relations comparing males ($p = .01$), however it was the only one gender difference we found. This study contributes to research on gender diversity in entrepreneurship by demonstrating that gender differences are not the same across cultures, therefore cultural background should be taken into account when exploring gender differences and similarities.

Keywords: entrepreneurial success, socio-emotional aspects of success, achievement, gender differences, workplace relationships

Does the pattern for autobiographical memory and arousal vary among breast cancer patients with and without PTSD?

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This study examined how breast cancer patients diagnosed with and without post traumatic stress disorder (PTSD) varied in memory patterns and arousal. A mixed method study was chosen to address the research objective. Thirty breast cancer (Stage I-III) patients were chosen for the study who completed the screening tool Detailed Assessment of Posttraumatic Stress (DAPS; Briere, 2001) and Autobiographical Memory Test (AMT; Williams and Broadbent, 1986). Their arousal level was assessed before and after the retrieval of memories in response to cue words. Among the thirty patients, five demonstrated PTSD symptoms and the other 25 did not fulfill the PTSD criteria. PTSD group recalled more over-general memories on the AMT while the non-PTSD group recalled more specific memories. In addition, PTSD as compared to non-PTSD women displayed higher levels of arousal. The narratives of the life experiences as revealed in the word cueing test surfaced prominent themes across the responses. Themes that emerged were beliefs, health, work, society and social relationships. This study suggests that a life threatening illness like breast cancer can precipitate PTSD symptoms and result in changes in cognitive and physiological domains. Thus, research is needed to examine the effects of PTSD symptoms on immune responses, cancer outcome, and adherence to medical regimens.

Keywords: post-traumatic stress disorder, cancer patients, memory patterns, arousal, autobiographical memory

Domestic violence response training for health professionals

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Domestic/Family Violence affects one in three women between the ages of 15 to 44 in Australia in their lifetime and many children witness the abuse. However, many health professionals receive little or no training on how to respond to families experiencing abuse. Since July 2007, approximately 800 health professionals have been trained in DiVeRT

(Domestic Violence Response Training). It is a project funded by FaHCSIA and DoHA for Practice Nurses and Aboriginal Health workers in rural and remote areas. The aim is to increase awareness and train workers to identify, respond appropriately and refer clients to specialised Domestic/Family Violence services. This training has been in the form of either two day workshops or an online version and has been delivered against a recognised Unit of Competency. Topics include effects on children, links to mental health, risk assessment and safety planning. Of the 800 health professionals who have been trained, most were nurses or Aboriginal Health workers but also included were other health workers such as psychologists and counsellors. The effectiveness of the training has been evaluated after the workshops and the online version and again at the end of 2 year period. The evaluations show the need for the training, increased awareness and confidence amongst workers and that the training has been used to assist clients once back in the workplace. All health professionals are in an ideal position to identify and respond to clients experiencing abuse. With appropriate training they can identify and refer families on to specific services

Keywords: domestic violence, domestic violence response training, health care providers, family abuse

Driving better with distraction: Auditory attention can decrease visual inattention blindness

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The relationship between auditory and visual attention has both theoretical importance and practical relevance to domains such as driving. Evidence suggests that talking on a cell phone impairs visual attention (Scholl, Noles, Pasheva, & Sussman, 2003; Strayer, Drews, & Johnston, 2003). Some research suggests that attending to auditory stimuli produces failures of visual awareness (Pizzighello & Bressan, 2008), while other research suggests listening to music can improve visual attention (Olivers & Nieuwenhuis, 2005). We used a moderate-load sustained inattention blindness (IB) task,

combined with a low-load auditory listening task. Participants tracked shapes that moved around the display and occasionally “bounced” off its edges. During *critical inattention trials* an unexpected object (UO) crossed the display. There were 104 participants (70 female) in three conditions: *no-audio* participants ($n = 33$) heard either silence or low background sounds; *instrumental* participants ($n = 35$) listened to instrumental music through headphones; and *language* participants ($n = 36$) listened to either short stories or pop music with lyrics. Sixty-four percent of no-audio participants experienced IB (i.e., failed to notice UO). IB was significantly lower in the language condition (44% IB) compared to no-audio, $\chi^2(1, N = 36) = 5.71, p = .023$. IB was also reduced in the instrumental condition (54% IB) but the difference was not significant, $\chi^2(1, N = 35) = 1.31, p = .292$. Within the language condition, there was no difference in IB comparing short stories (45% IB) with pop music (44% IB), $\chi^2(1, N = 36) = 0.01, p = .604$. Repeated-measures ANOVA indicated no significant differences in primary task accuracy across trials comparing experimental conditions, $F(2,97) = 1.44, p = .243$, and noticers versus nonnoticers of the UO, $F(1,97) = 0.85, p = .358$. We found that IB decreases when listening to auditory stimuli, specifically language-based audio. Our results support the idea that IB can result from overinvestment in the primary task (Olivers & Nieuwenhuis, 2006). Focusing attention on a single task prompts observers to block all potential distractions, whereas distributed attention allows the opportunity to notice unexpected objects that are unrelated to the primary task.

Keywords: *attention and driving, auditory attention, visual attention, inattention blindness, unexpected objects*

Dual decision making styles can enhance self efficacy

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Popular applied decision making models have categorized individuals as either “rational” or “emotional”, and more recently as either “maximizers” or “satisficers.” Although these

dichotomies have some anecdotal appeal, they are unsatisfactory because they lack a clear theoretical mechanism for relating important latent individual differences’ variables affecting decision making processes, and because they imply that individuals tend to be of one type or another. There is no empirical evidence for these simple dichotomies and we suggest a different distinction between propensities toward a more intuitive decision style or a more analytical style that need not be mutually exclusive. Mutually exclusive dichotomies seem contrary to what we witness in both everyday decision making and expert decision making. Experts such as airplane pilots, emergency room physicians, stockbrokers, and firefighters who must make both deliberate analytical decisions and quick intuitive decisions seem to have mechanisms that allow them to move from one mode to another as the situation warrants. We describe exploratory and confirmatory factor analyses indicating that analytical and intuitive styles are robustly identified and validated and reflect independent psychological latent variables. Correlations with other widely used individual differences measures are presented and suggest strong concurrent and discriminant validity. We provide empirical evidence that these two styles are not opposite extremes on a single continuum, where strong endorsement of one style precludes endorsement of the other. In particular, we present results that suggest an interesting relationship between endorsements of decision styles and self-efficacy. Individuals who report a propensity for either an analytical or intuitive decision style are much more likely to experience greater self-efficacy. Further, those individuals who endorse both styles report even higher self-efficacy. We argue that this evidence suggests that in applied decision environments the most self-efficacious decision makers may be those who show flexibility in their decision style – that is, those who are willing to endorse both approaches, depending on the demands of the situation. We argue that to enhance decision self efficacy it does not matter whether you have a dominant decision style, as long as you endorse both and feel comfortable using either.

Keywords: *decision-making, analytical and intuitive decision making, self-efficacy, expert decision making, latent psychological variables*

Early intervention with children who witness domestic violence

WORTHY, S. (Metropolitan State College of Denver)

The data for presentation was collected as part of a three year, U.S. federal demonstration grant conducted by a group of agencies in Colorado to assist children in rural areas who witness domestic violence. The data to be presented are the results of the pre-treatment and post-treatment measures designed to understand the impact of proactive treatment on children who are observers of family violence within their home. As part of the grant, 108 children participated in the study due to their parent being treated for mental health issues related to domestic violence. The children were assessed using the age-appropriate form of the Trauma Symptom Checklist (TSC). All participants were administered the assessment tool prior to treatment. The children were then treated with a combination of individual and group therapy. The TSC was again administered at termination or after six months of treatment, whichever came first. There are eight sub-scales as part of the TCS. Those sub-scales include anxiety, depression, anger/aggression, posttraumatic stress introversion, posttraumatic stress avoidance, posttraumatic stress arousal, dissociation, and sexual concerns. Out of the eight sub-scales, five areas demonstrated significant improvement on the post-treatment measure. In addition, the TCS provides a Posttraumatic Stress Total (PTS Total) score. In this case the PTS Total score also yielded a significant positive change. Children who witness domestic violence experience symptoms of trauma. These symptoms are not typically significant enough for them to be referred for treatment by parents, teachers, or school counselors. However, these symptoms can be identified by using appropriate assessment strategies. More importantly, early mental health intervention can reduce these trauma symptoms. This early symptom reduction may ameliorate more significant symptom expression and more serious problem behaviors in the future.

Keywords: domestic violence, trauma, early intervention

Economic circumstances as a motivator for fraud amongst non-gamblers, gamblers and problem gamblers

ENGLAND, M.

The aim of the current study was to examine whether a severe change in economic circumstances triggers fraud. The recent economic crisis provides a critical circumstance against which changes in indicators for fraud amongst non-gamblers, gamblers and problem gamblers are measured. The implications for the changes provide evidence regarding the motivation to commit fraud. A more thorough understanding of the motivation to commit fraud can provide a basis to take more effective preventative action.

Keywords: fraud, gambling, economic, problem-gambler, fraud-prevention

Educational diagnosis by graphical testlet response model

OHMORI, T. (Tama University), SHIGEMASU, K. (Teikyo University)

This study shows a new adaptive testing method for diagnosing students' misconceptions or errors (which are called bugs) with the Bayesian network model. Item Response Theory (IRT) model is often used for usual adaptive testing, but when those tests are made up of testlets which are groups of test items, standard IRT models are often not appropriate due to the assumption of local dependence between items or testlets. Some testlet-based IRT models have recently been developed under such conditions (Wainer et al., 2000), but there are not so many. In this study, avoiding the local independence problem, a Bayesian network model is introduced to represent the structures within testlet and also relations between each testlet directly and intuitively. Incorporating bug model to the adaptive testing, not fully mastered students can realize their abilities. The simulation study shows the validity of this method, and also real data (arithmetic) is applied to this method. This study can be applied to all educational testing, especially arithmetic. If a new web based testing (WBT)

system would be constructed, it will provide advice to misunderstanding students for correcting their errors.

Keywords: *students, students' errors, Bayesian network model, item response theory, adaptive testing*

EEG biofeedback in the treatment of complex PTSD comorbid with substance abuse

ASKOVIC, M. (New South Wales Service for the Treatment and Rehabilitation of Torture and Trauma Survivors)

This presentation aims to provide an overview of the innovative clinical work of the New South Wales Service for the Treatment and Rehabilitation of Torture and Trauma Survivors (STARTTS) using electroencephalographic (EEG) biofeedback as an adjunct to psychotherapy when working with complex post-traumatic stress disorder (PTSD) comorbid with substance abuse. A detailed case study will be used to show how EEG biofeedback is conducted with torture and trauma survivors and integrated with psychotherapy. A two-step approach will be described. The first step begins with Sensory Motor Rhythm (SMR) training for regulation of the client's physiological arousal and reduction in fear response. The second step entails work on addiction via deep state Alpha/Theta training combined with the constructive visualization of the desired outcomes. A series of psychological and physiological pre and post treatment measures including Harvard Trauma Questionnaire, Hopkins Symptom Checklist, Test of Variables of Attention and Quantitative Electroencephalogram will be presented. Long term positive changes in the client's psychological and physiological state will be discussed. Based upon our extensive practice of EEG biofeedback, this paper will explain how this intervention, when integrated with psychotherapy, offers an effective approach to successful treatment of traumatized clients with complex presentations.

Keywords: *post-traumatic stress disorder, electroencephalographic feedback, attention, sensory motor rhythm training, fear response*

Effect of 30 practices in improving attention in children with ADHD

GHOLAMI, M. (Islamic Azad University),
AZHDEHFAR, L. (Ruzbeh Clinic), GOLKARIAN, P.
(Islamic Azad University Tehran)

The most common problem in children with Attention Deficit Hyperactivity Disorder (ADHD) is the attention deficit. The main goal of this study is improving the ability to concentrate in children with ADHD by training and practicing 30 special activities for developing attention within five months. Among children coming to Ruzbeh Clinic with ADHD, ten were chosen and the mean age of this group was 8 years and 3 months. They were divided randomly into two groups of five, and the children in one group just received pharmacotherapy (control group) and the other five children received pharmacotherapy and 30 practical exercises during five months (experimental group). After treatment, individuals in both groups were tested by the Test of Everyday Attention (TEA) which estimates permanent attention, transforming attention and selective visual attention, through three ways (auditory method, visual method and pencil and paper method). The cut off mark is five and the experimental group's mean was 3.90 in pretest and the control group's mean mark was 3.82 and the post test was totally different. In the control group it was 5.30 and in the experimental group the mark reached at the point of 7.1. The 30 practical exercises play an efficient role in improving attention in children with ADHD.

Keywords: *attention deficit hyperactivity disorder, test of everyday attention, attention, concentration*

Effect of 70 practices in decreasing learning disorders in children with ADHD

GHOLAMI, M. (Islamic Azad University),
AZHDEHFAR, L. (Islamic Azad University Tehran),
GOLKARIAN, O. (Ruzbeh Clinic)

As we know children with ADHD are more vulnerable to have learning disorders. The question is do the 70 sensory-motor activities have effective role in decreasing learning

disorders? Among children coming to Ruzbeh Clinic with ADHD, 16 first grade students were chosen. They were divided randomly into two groups of 8 with the children in one group only receiving pharmacotherapy (control group) and the other 8 children receiving pharmacotherapy and 70 sensory-motor exercises during six months (experimental group). Before and after treatment the Grade Point Average (GPA) of individuals in both groups was compared. In the pretest, the GPA of the control group was 13.30 of 20, and the experimental group's GPA was 13.25 of 20. Post test was totally different. In the control group it was 16.50 of 20, and in experimental group the GPA reached at the point of 19.30 of 20. The 70 sensory-motor exercises have an efficient role in eliminating learning disorders in children with ADHD.

Keywords: *attention deficit hyperactivity disorder, learning disorders, attention, sensory-motor activities*

Effect of age on fairness perceptions: A comparative study on Indian Banks

PURANG-SINHA, P. (Indian Institute of Technology Bombay), SHRIVASTAVA, A. (Indian Institute of Technology, Bombay)

This study aimed at examining the effect of age on the perception of fairness of different performance appraisal systems in Indian banks. Liberalization of economic policies has brought significant changes in the structure and operations of Indian banks. Past researchers have compared Public and Private Sector Banks and found differences in structures, use of technology, economic efficiency, Human Resources (HR) systems, etc. Employees of diverse age-groups differ in terms of their needs, values, and expectations and organizations face the challenge to address these 'differences'. This study explores the effect of age on the perception of fairness of performance appraisals. A survey research was conducted in two banks with a total sample of 340 bank employees from a leading Public Sector ($N = 230$) and a Private Sector Bank ($N = 110$) in India. Convenience sampling was used to collect the sample. Performance Appraisal Fairness Scale with eight dimensions was adapted from Thurston (2001). Regression analysis was used.

The results indicated a positive linear relationship between age and perception of fairness in the Public Sector Bank (older employees found their performance appraisals fairer) and a negative relationship for the Private Sector Bank (younger employees perceived more fairness with their appraisal practice). This study shows the needs of younger employees not being met in Public Sector Bank and older employees in Private Sector Bank. Both banks need to develop HR practices and policies that address employee differences.

Keywords: *age differences, employee differences, performance appraisal, perceived fairness, employee appraisal*

Effect of spatial attention on dynamic expression processing

ZHANG, L. (Chinese Academy of Sciences), ROEDER, B. (University of Hamburg), ZHANG, K. (Chinese Academy of Sciences)

Affective expression is one of the most salient events for human survival and successful social interactions. Many studies have revealed spatial modulation on affective expressions. In fact, emotions are usually perceived by combining facial and vocal expressions in everyday life. More important, dynamic and static facial expressions are processed differently. However, few studies are concerned with dynamic expressions. Our study used dynamic real-life facial expressions and vocal prosody and explored the spatial modulation on the processing of multisensory affective expressions. Sixteen volunteers (five male; $M = 24.7 + 4.2$ years) participated in this research. The stimuli included videos with an actor uttering a bi-syllabic word in angry, happy or neutral emotion. Mean duration of the stimuli was 700 milliseconds ($SE = 26$ milliseconds). Participants were seated in front of a computer screen. In every block, participants were asked to pay attention to one side (left/right) only and detected a 200 millisecond interruption in the facial expression. There were sixteen blocks in the experiment (a total of 132 stimuli in one block, and 24 of them with the interruption). The behavioral responses and electroencephalographic results (EEG) were recorded. From the behavioral results, the

average reaction time to the targets was 1324.3 + 12.8 milliseconds. Participants' accuracy of detection was 93.45 ($SE = 0.016$). There was no significant difference among emotions. From the EEG results, spatial attention effect was found short after stimulus onset (100 to 120 milliseconds). The mean amplitudes were marginally significant at ipsilateral parietal-occipital sites (Difference = $-.433$, $p = .073$) and midline parietal sites (Difference = $-.689$, $p = 0.058$). From 240 to 280 milliseconds, attended ERPs were more negative at contralateral parietal-occipital sites (Difference = $-.707$, $p < .05$). There was a sustained difference at late component (380 to 580 milliseconds, main effect of attention $F = 5.041$, $p < .05$; 660 to 900 milliseconds, main effect of attention $F = 7.889$, $p < .05$). However, no significant and steady emotion effect was found. Facial-specific component N170 was found in all conditions. The expressions perception was modulated by spatial attention. However, expressions as the salient stimuli were processed fast even in the unattended location and irrelevant to the task, no matter which kind of emotion valences. N170 was not modulated by spatial attention and facial emotion valence.

Keywords: affective expression, facial expression, facial emotion valence, spatial attention

Effectiveness of a life skills intervention on psychosocial parameters among Tibetan school adolescents

BISWAS, U. (The Maharaja Shivaji Rao University of Baroda)

The present study examined the effectiveness of life skills interventions in reducing stress and anxiety, strengthening coping styles, self-confidence and emotional intelligence among Tibetan refugee adolescents studying in SOS Tibetan Children's Village in the Indian state of Himachal Pradesh. A pre-post controlled trial

design was used. An initial sample of 600 Tibetan refugee students aged 12 to 19 years participated in the study. They were administered a questionnaire measuring the level of stress, anxiety, coping styles, self-confidence and emotional intelligence. Using a median split the sample was divided into two equal sized groups. Participants scoring below the median score were randomly assigned to two equal sized groups (experimental group and control group). The experimental group was assigned to a standardized training module consisting of ten life skills for four months on average. The participants were assessed on life skills and if it was required, they were retrained until they achieved the pre-set standard. After a gap of two weeks of attaining the set standards they were administered the same questionnaire. The Pre and Post intervention data were analyzed using ANCOVA and paired t-tests to measure the effectiveness of life skill intervention on the psychosocial factors. In the pretest, experimental and control group differed significantly only on trait anxiety. However, after the life skills interventions, paired t-test revealed that there was a significant difference between experimental and control group on perception of stress, anxiety (state and trait), use of coping strategies, self-confidence and emotional intelligence. Life skills interventions which have been previously found effective in combating HIV, AIDS, smoking, teenage pregnancy also contributes greatly to manage stress and anxiety and enhance coping skills, self-confidence and emotional intelligence among adolescents.

Keywords: life skills, stress, anxiety, coping, self-confidence

Effects of an educational television program on reduction of prejudice towards schizophrenia

ITO, T. (Wako University), KODAIRA, T. (Seirei Christopher University)

The present paper reports on the development of television-based education to reduce the Prejudice Towards Schizophrenia (PTS) of nursing students. The television (TV) program was derived from a thirty-minute educational program which featured a newly married couple with schizophrenia. The effects of the TV

program were measured by the Attitude toward Mental Disorder Scale in a pre and post-test. Scores on the Social Distance Scale ($M = -.30$, $F(1, 276) = 97.014$, $p < .001$) and the Bad Image Scale ($M = -.83$, $F(1, 276) = 820.164$, $p < .001$) were smaller after program viewing with larger effect size for the Bad Image Scale ($ES = 1.84$) than the Social Distance Scale ($ES = .55$). The percentage of attitude change in the desired direction was 98% for the Bad Image Scale, and 69% for the Social Distance Scale. Attitude change was observed in most of the participants. Results of the present study indicated that even a short, 30-minute TV program can be effective in reducing PTS.

Keywords: *stigma, schizophrenia, prejudice, nursing, image*

Effects of electronic media use on children's quality of life: Website survey for mothers

HASEGAWA, M. (Yokohama-City University),
SAKAMOTO, A.

This study addresses the question "what are the factors that enhance children's Quality of Life (QOL)?" Children in the modern era are exposed to electronic media such as TV and video games for many hours. Does contact with electronic media enhance or lessen children's QOL? In this research, we conducted a two-wave panel study targeting mothers who have elementary school children in order to investigate whether media contact affects children's QOL. We also examined the differences in media influences by socio-economic status. Research subjects were 2531 mothers who have elementary school children. Participants were recruited from the registrants of an internet research company. The participants completed two identical website surveys two months apart. The first survey was conducted in March 2009, and the second survey in May 2009. We measured the length of time a child was exposed to TV, video games, mobile phone and computers as media contact (weekdays and holidays), the type of involvement of the parent and child during media contact (e.g. "There is a limit on television watching time", "My child watches television alone"), the parent's feeling towards media (e.g., "It is possible to be impressed"), the household's

annual income, and QOL (KINDL(R) Parents' version). Results indicated that the group with high annual income also had high QOL scores. Mothers in the higher income group tended to control the child's media use, and mother and child were involved in the media together. We conducted a path analysis on annual income, QOL score and media contact condition, and found that annual income influenced the type of media contact, and type of media contact influenced children's QOL. It was indicated that QOL related to; types of involvement of the parent and child during media contact, the parent's feeling towards media, and the household's annual income. The results of this study also showed that annual income influenced the type of media contact, and the type of media contact influenced children's QOL.

Keywords: *electronic media, children, quality of life, mothers, parental involvement*

Effects of self-evaluation of computer proficiency on computer self-efficacy in general information education

KAGEMURA, Y. (Koshien University), HARADA, A.
(Koshien Junior College)

The present study explored the relationship of computer proficiency used by general information education and computer self-efficacy, testing the instability of computer self-efficacy and computer anxiety in general information education. We conducted a survey on "self-evaluation of computer proficiency", "computer self-efficacy" and "computer anxiety" which was administered three times (April, June, July) to 212 university students. The scores of "self-evaluation of computer proficiency" were categorized into three groups (Low group, Middle group, High group). The result indicated that the interaction between three times and groups of computer proficiency was significant in both "computer self-efficacy" and "computer anxiety". High group in July was higher than in June, and low group in July was lower than in June. Furthermore, it was indicated that students lost their confidence and increased anxiety when they learned the unknown course contents.

Keywords: *computer proficiency, self-efficacy, computer anxiety*

Effects of snowfall on seat belt use

SIMSEKOGLU, Ö. (Izmir University of Economics), LAJUNEN, T. (Middle East Technical University)

The present study aimed to investigate the effects of adverse weather conditions (snowfall) on seat belt use and child restraint use among Turkish car occupants. A total of 611 front seat occupants (drivers and front seat passengers) were observed for their seat belt use, age and sex. Also, 137 child passengers were observed for their seat belt use, age and seating location. In order to study the effects of weather on seat belt use, observations were conducted in two different times with two different weather conditions (sunny dry weather versus cold weather with snow on the road). Chi-squared analysis revealed that a significantly higher proportion of the observed drivers, front seat passengers and child passengers were using a seat belt in bad weather than in good weather condition. Increase in seat belt use in adverse weather conditions compared to normal weather conditions suggests that effects of adverse weather conditions are compensated by using a seat belt. However, the increase in seat belt use in adverse weather conditions was still far from sufficient for car occupant safety.

Keywords: *seat belt use, driver safety, weather condition effects on driving, car occupant safety*

Effects of the 'Pencak-Silat' training program on the aggressiveness of participants

SRISAYEKTI, W. (Padjadjaran University), KEMAS, M. A. (Padjadjaran University, Bandung)

This study was a continuation of a descriptive study on the aggressiveness of participants of the Indonesian traditional defend-sport 'Pencak-Silat' training. It was intended to find out whether the training program had a significant effect on the aggressive thoughts and feelings of participants. Interrupted time-series with sequential multiple group – multiple intervention design (Glass, 1975) was applied in

this one-month study (twice a week, two hours per session). Forty-five subjects (males, 19 to 25 years old, $M = 21.9$; $SD = 1.33$) were involved. They were from three levels of training (fifteen subjects each). An adapted Aggression Questionnaire (Buss & Perry, 1992) and Story Completion Task (Dill, 1997) were used to measure aggressiveness. Results showed that the 'Pencak-Silat' training program significantly increased aggressive thoughts (Level One, $t = 0.995$; Level Two, $t = 0.986$; Level Three, $t = 0.981$; $\alpha = 0.005$) and feelings (Level 1, $t = 0.990$; Level Two, $t = 0.990$; Level Three, $t = 0.977$; $\alpha = 0.005$). The results are in line with the General Aggression Model (Anderson & Bushman, 2001). Based on these results, improvements of the training program should be recommended and developed.

Keywords: *aggressiveness, Indonesian traditional training program, aggressive thoughts, aggressive feelings, story completion task*

Efficacious social control in neighbourhoods prevents antisocial behaviour: Mediation of socialization and unstructured activities

YOSHIZAWA, H. (Gifu Shotoku Gakuen University), YOSHIDA, T. (Nagoya University), HARADA, C. (Nagoya University; Japanese Society for the Promotion of Science), PARK, H. J. (Aichi Bunkyo Women's College), NAKAJIMA, M. (Mie University), OZAKI, M. (Kanazawa University)

On the subject of preventing antisocial behaviour by efficacious social control in neighbourhoods, collective efficacy (Sampson et al., 1997) has been explained using two theoretically distinctive mechanisms: (1) the successful socialization of children at the community level, which develops their aversion to antisocial behaviours, and (2) the imposition of restrictions on unstructured activities that increase the probability of children engaging in antisocial behaviours. We hypothesized that the lack of collective efficacy within communities could be mediated by certain types of social information-processing and degrees of self-regulation. A lack of collective efficacy would increase children's exposure to violence within the community, which could eventually lead them to engage in similar acts (i.e. unstructured

routine activities). A total of 503 undergraduates were instructed to recall their early-to-middle adolescence periods (from elementary school to junior high school) when answering the questionnaires. The perceived level of collective efficacy and the frequency of exposure to violence in the communities they belonged to were assessed using self-report items. Positive and negative aspects of social information-processing were assessed by social rule appropriateness, normative beliefs about aggression and cognitive distortion scales. The level of self-regulation was assessed by using the social self-regulation scale. Routine activities were assessed through memories of unstructured socializing activities during high school years. Antisocial tendencies were assessed based on the estimation of the seriousness of the delinquent behaviours of the respondents, along with their experiences in the past. The results of structural equation modeling revealed that the effect of collective efficacy on antisocial tendency was perfectly mediated by social information-processing and self-regulation (i.e. socialization indices); further, the frequency of exposure to violence was found to be partially mediated by routine activities. These findings provide evidence that high informal control (i.e. collective efficacy) fosters community level socialization and eventually decreases the likelihood of antisocial behaviour. On the other hand, the lack of informal control within the community (i.e. social control dysfunction) increases the crime rate of the area as well as the likelihood of children engaging in unstructured and antisocial behaviours. Future research in this area should include longitudinal investigations and community level analyses.

Keywords: *antisocial behaviour, social control, collective efficacy, social information-processing, self-regulation*

Efficacy of neurofeedback as a treatment for executive dysfunction: Establishing best practice from clinical evidence

ANIFTOS, M. (Inclusive Education Services (R)),
MCKENNA, M. (University of Southern Queensland)

The primary aim of the present study was to investigate the clinical utility and ecological validity of neurofeedback (NFB) in an Australian

sample, effectively contributing to the recognition of NFB as an evidence-based practice. It was anticipated that this study would demonstrate improvements in the core symptoms of executive dysfunction (poor behavioural and metacognitive self-regulation) following NFB intervention. The present study also aimed to investigate the minimum number of neurofeedback training sessions required to demonstrate significant improvements as indicated by client reports and quantitative measures. The secondary aim of the study was to establish the viability of using clinical data for longitudinal studies to investigate the retention of NFB treatment effects. Participants were patients seen at a private clinician's practice in Toowoomba, Australia. The participant pool consisted of both males and females aged between 6 and 12 years. They were referred to the clinic by their general practitioner or primary caregiver(s) and received treatment on a fee for service basis. The participants were assessed to be demonstrating symptoms of executive dysfunction, predominantly associated with developmental disorders of childhood such as ADHD, PDD, or Anxiety. Some of the participants were on an existing treatment plan of psychostimulant medication while others were seeking psychological intervention as a non-invasive method of treatment. At the time of consultation, the clinician obtained informed consent in writing for data to be de-identified and collated in the event of a future study. All participants engaged in at least one session of neurofeedback training within the past two years. The study is currently in progress.

Keywords: *neurofeedback, behavioural self-regulation, meta-cognition, executive dysfunction, developmental disorders*

Effort counts and achievement goal matters: Patterns of credit and blame in pursuit of achievement in a Chinese society

FWU, B. (National Taiwan University)

Previous research indicates that more credit is given to academic success whereas less blame is assigned to failure. This study argues that patterns of credit and blame may vary with levels of effort and types of achievement goals.

Academic goals, like maths achievement, are burdened with high social value, whereas non-academic goals, like art, are endowed with high personal value in Chinese tradition. Scenario questionnaires were administered to 720 high school students in a Taipei metropolitan area in Northern Taiwan. Statistical analysis of MANOVA was applied to analyse the data. The results show that: (1) the moral value of effort-making in pursuit of achievement goals; (2) in case of success, there were larger differences in credit assignment between 'diligent' and 'idle' students in the maths than in the art domain; and (3) in the failure situation, there were larger discrepancies in blame infliction between 'diligent' and 'idle' students in the maths than in the art domain. The findings shed light on how students learn in the Chinese cultural tradition, and add a new perspective to the existing literature of credit and blame in the educational setting.

Keywords: *effort, goal matters, credit, blame, achievement*

Emotion regulation in children with acute lymphocytic leukemia: A qualitative study of patients and survivors in Indonesia

MANSOER, W. (University of Indonesia), FITRI, S. (University of Indonesia), ATMOWIRYO, E. (University of Indonesia)

The aim of this qualitative study is to examine emotion and emotion regulation among children with Acute Lymphocytic Leukemia. Data were collected by interviews with four patients (9-13 years) and their parents, and also with two survivors (21-24 years) who had the same illness during their childhood. Results showed that both inpatients and survivors, during initial diagnosis and chemotherapy preparation, experienced negative emotions such as feeling sad, scared, angry, and embarrassed. They reported that they felt bored when they went through chemotherapy period. To regulate their emotion when they were diagnosed with leukemia, the children used response-focused actions (i.e., crying, angry, hiding their feelings), while antecedent-focused action was provided by others (situation selection and situation modification). After undergoing chemotherapy

for 1-3 months, the children were able to use antecedent-focused responses by themselves (attention deployment and cognitive change), and their response-focused actions decreased. Children with supports from others could sort adaptive response alternatives that could be used in various kinds of situation to regulate their emotion.

Keywords: *emotion regulation, antecedent-focused, response-focused, leukemia, children*

Emotional evaluation and cognitive activity: Examining the condition and internal mechanism

FANG, P. (Capital Normal University), MA, Y. (Capital Normal University), XU, H. (Capital Normal University)

This study intends to explore the internal mechanism that reveals how elicited emotional evaluation influences subsequent cognitive activities, and to help make proper emotional evaluation in daily life, as well as to provide empirical evidence to improve quality of cognitive activities. Four hundred and sixty-five secondary school students are chosen as subjects in two experiments. One experiment explores whether the activated certainty impacts on assured judgment. The other intends to find which emotional factor impacts the choice of cognitive processing style without an activation process. It has been found that, when asked to make assured judgment about their evaluation accuracy, the subjects with different evocative emotions have significantly different judgments. Without activated evaluation, emotion valence is automatically activated. The elicited evaluation influences the subsequent judgments and people take this activated evaluation as information that affects subsequent cognitive activities.

Keywords: *elicited emotional evaluation, cognitive processing style, evaluation, evocative emotions*

Emotional experiences, empathy and the influencing factors

FANG, P. (Capital Normal University), LI, Z. (Capital Normal University), JIANG, Y. (Beijing Sport University)

This study explores the relationship between emotional experiences and empathy, as well as the role of emotion regulation and environmental factors. The results of the study will provide evidence and empirical support for intervention and treatment in this field. Experiments and questionnaires were used to investigate approximately 500 individuals in three studies. This research has found that people with a higher level of emotional experiences have more sympathy and less personal distress. Emotion regulation and emotional experiences have interaction effects with empathy. Environmental factors (including behavioral validity and cultural comparability) and emotional experiences have joint effects with empathy. The results suggest that emotional experiences affect empathy. Emotion regulation and environmental factors regulate the relationship between emotional experiences and empathy.

Keywords: *emotion experiences, empathy, emotion regulation, personal distress, cultural comparability*

Emotional forecasting bias, decision making and related factors?

FANG, P. (Capital Normal University), MA, Y. (Capital Normal University), JIANG, Y. (Beijing Sport University)

This study integrates the validation of the intensive bias and duration bias in decision-making to explore the relationship between emotional forecasting bias and decision-making, and the influencing factors on this relationship. The result can help understand forecasting bias, promote decision-making ability, and improve decision-making quality. Under accepted conditions, individuals tend to avoid making decisions due to the intensity bias. The experiment adopted ultimatum game formulas and a questionnaire to investigate the research questions with 284 school students. Under accepted conditions, individuals tend to avoid making decisions if the intensity bias becomes stronger; but under refused conditions, this result is reversed. Under accepted conditions,

emotion regulation strategy, personality and age have no influence on the relationship between bias and decision making; but under refused conditions, they have effects on this relationship. When the duration bias is strong, the sane and senior students who adopt the cognitive reappraisal strategy avoid making decisions, but the sensitive and the younger students who adopt the expression suppression strategy tend to make decisions. The results show that people have intensity bias and duration bias when they predict the emotional response to future events. Intensity bias and duration bias influence whether individuals choose to make decisions or not.

Keywords: *intensive bias, duration bias, decision making, forecasting*

Emotional intelligence and its relation to human abnormal behaviour: Comparison between addicted and nonaddicted people

HOMAYOUNI, A. (Islamic Azad University)

Emotional intelligence (E/I) consists of appraisal of emotion in the self and others, regulation of emotion in the self and others and utilization of emotion in solving problems. Subsumed under these branches are functions such as verbal and non verbal appraisal and expression of emotion and using emotions to motivate as part of the utilisation of emotions (Salovey & Mayer's, 1990). Emotional intelligence components are important in psychological functions such as problem-solving, happiness, stress-tolerance, self-actualization and interpersonal relationship. So the research aimed to investigate role of Emotional intelligence in tendency to addiction. In the sampling process a total of 73 addicted people and 73 non-addicted people were randomly selected. All participants were requested to complete Schutte's Self- Report E/I Test (SSREIT) (33 items). The test measures ability of E/I in three fields: Appraisal of emotion, regulation of emotion and utilization of emotion. In order to analyze the data, an independent T test was used to compare means of two groups. Findings indicated significant differences between two groups in components of emotional intelligent. Non-addicted people

had more scores in appraisal of emotion, utilization of emotion and general score of emotional intelligence. However, there was no significant difference in regulation of emotion in two groups. Considering the results, it is recommended to apply the plans for enhancing emotional intelligent components in order to increasing abilities and competencies in confronting with crisis and bad events and reducing risk of abnormal behaviors, especially addiction.

Keywords: *emotional intelligence, addiction, emotion expression*

Emotional social sharing, emotion recovery and influencing factors

JIANG, Y. (Beijing Sport University), MA, Y. (Capital Normal University), HONG, J. (Capital Normal University)

This study attempts to examine the relationship between emotional social sharing (ESS) and emotion recovery, and explore the influencing factors on the relationship. The study helps better understand skills of emotional social sharing, make proper use of sharing in daily life, and provides empirical evidence for psychotherapy. This research uses the laboratory experimental method to investigate 58 volunteers, involving college undergraduates and graduates. The study shows ESS has a significant effect on negative emotion recovery. Irrelevant sharing is more helpful for short-time recovery from negative emotions than ESS, which has no effect on positive emotion recovery. For respiration rate, the valence of emotion and type of sharing have an interaction effect on emotion recovery at different stages. Irrelevant social sharing decreases the respiration rate for positive emotions, and increases negative emotions. This study shows the relationships between different types of social sharing and emotion recovery are different, and that the relationship is affected by the valences of emotion. Respiration rate is a sensitive index for the change of emotion valence.

Keywords: *emotional social sharing, emotion recovery, emotional valence, sharing, respiration rate*

Empirical investigation of family environment among aggressive individuals: Therapeutic implications

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The study was aimed at exploring various elements of family environment that might predispose the development of aggressive behaviour in individuals. With the knowledge of these factors, aggressive behaviour can be prevented by incorporating a specific family counseling program to reduce or minimize the presence of such an environment at home. Three hundred individuals in the age range of 14 to 22 years were selected randomly from various schools and colleges of Patiala district of Punjab, India and were given the family environment scale (Moos,1989) and Aggression Questionnaire (Buss & Perry, 1992) to assess present elements of their family environment and aggression levels. Correlation coefficients were calculated to assess the relationship between aggression and elements of family environment. Aggression was found be significantly correlated with conflict ($r = 0.16, p < 0.05$), expressiveness ($r = -0.17, p < 0.05$), independence ($r = -0.16, p < 0.05$) and organization ($r = -0.20, p < 0.05$) sub-dimensions of the Family Environment Scale. More specifically, conflicts in families are found to be related with anger ($r = 0.16, p < 0.05$) and physical aggression ($r = 0.17, p < 0.05$) sub-dimensions of the Aggression Questionnaire but not with hostility and verbal aggression. A highly significant correlation has been found between the physical aggression and independence ($r = -0.26, p < 0.01$) sub-dimensions of the family environment. From the findings it can be concluded that conflicts in family are found to be associated with aggressive behaviour of the individuals, the more conflict in the family the higher the tendency of its members to behave aggressively. On the other hand, family environment which promotes expressiveness, independence and organization may minimize the probability of developing aggressive behaviour in its members as these elements are found to be negatively correlated with aggression. The above mentioned findings suggest that by developing a family counselling model which would emphasize mainly on

developing conflict resolution strategies and inculcating expressiveness, independence and organization in family setup, development of aggressive behaviour can be prevented. Parents can be informed about the relationships so that they can modify their parenting style to avoid the occurrence of maladaptive behaviors like aggression.

Keywords: *family environment, aggression, India, conflict, counselling*

Employee engagement: A validated model

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The aim of the research was to confirm an engagement model that demonstrates the predictive relationships between engagement; its drivers (antecedents), and outcomes (consequences) in a multinational travel organization. Positive relationships were anticipated between variables. Model confirmation was conducted in two parts: the measurement model (engagement and its drivers), and the structural model (engagement, its drivers and outcomes). Part one of the study used confirmatory factor analysis to validate a 52 item engagement scale comprising of eight engagement drivers (senior leadership, team leadership, work demands, work support, employee empowerment, continuation, customer focus, and financial rewards), and an engagement variable. Part two used structural equation modeling to validate the structural model which detailed the causal relationships between engagement drivers (a latent variable with eight confirmed indicators), engagement, and engagement outcomes (a latent variable with five initial indicators; retention, productivity, customer satisfaction, employee commitment, and profit). The measurement model was confirmed with all eight drivers showing positive loadings onto the latent engagement driver variable (path values ranged between .52 and .82). However, the proposed structural model failed to converge. Anticipated error in the outcome variables lead to post hoc modifications. Convergence was achieved after grouping engagement outcome variables into personal and organizational outcomes. The

anticipated positive causal relationship between the combined eight engagement drivers and engagement was confirmed (standardized coefficient = 0.93). However, the anticipated positive causal relationship between engagement and its outcomes was only partially supported. Engagement had a positive effect on personal outcomes (employee commitment), but a negative effect on organizational outcomes (productivity and profit). In both instances the effect was non-significant. Predictive relationships confirmed in this study indicated that effective management of engagement drivers can significantly improve engagement levels within an organization. Positive effects at the individual level such as increased commitment may also be anticipated. However, contrary to previous research, engagement may not always have a positive impact on organizational outcomes such as productivity and profit.

Keywords: *engagement, structural equation modeling, organisational outcomes, engagement, positive relationships*

Encounters with theory and personal process: Students' experiences of studying Process Experiential Emotion-Focused Therapy (PEEFT).

CHONG, M.

To date research on Process-Experiential Emotion-Focused Therapy (PEEFT) has focused on therapy outcomes. An investigation of the published literature on post-graduate therapist training revealed that few authors had previously examined training from the student perspective. Training in PEEFT involves readings, demonstrations, experiential learning via skill development and live practice. The aim of this study was to examine students' experiences of PEEFT training, using qualitative methods and principles drawn from experiential learning. A post-graduate class in Counselling Psychology and Professional Counselling received intensive PEEFT training as part of their course requirements. Six volunteers were asked during and after their training to provide, via email, short written reflections of their experience. Data were analysed using an approach consistent with Grounded Theory. Participants

reported both positive and negative experiences in their training. They noted how client experiences in demonstrations helped them to feel comfortable and to learn the method; how exercises helped them open up their awareness; how experiencing a technique as a client helped when in a counsellor role; and how positive lecturer feedback helped when practicing the method. Participants also noted potential difficulty using PEEFT and rigidity in how the method was applied. They were concerned about the lecturers' perceived expectations and assumptions; they also expressed a need for freedom to critically appraise the theory and to learn at their own pace. In addition, the participants described discomfort linked to their own preparation, to the length of the sessions, and to a need for more interpersonal and conceptual safety. Analysis indicated that the participants wanted more demonstrations and practice, and wanted the theory to be delivered more expeditiously in order to facilitate this. They asked for more attention to be given to group processes, preparation and debriefing, and for more support from their lecturers. The participants especially valued the opportunities to experience PEEFT for themselves, and drew parallels between their learning experience and a therapy experience. The analysis undertaken in this study provided a means to explore students' personal experiences of training in PEEFT.

Keywords: process-experiential emotion-focused therapy, students, grounded theory, training

Energymark: A behavioral intervention program designed to reduce household greenhouse gas emissions

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Finding ways to promote positive action in response to climate change is arguably the greatest ever challenge to the field of applied psychology. Emission reduction targets set by governments typically do not specify how emissions will be reduced, but it is likely that regulation and other market-based mechanisms alone will be insufficient. Encouraging individual action through behavior change interventions will be an important component of the effective mitigation of climate change. We designed an

intervention program, *Energymark*, which incorporates a number of mechanisms known to encourage behavior change, including social support, group discussion, goal setting, feedback, and provision of information from a trusted source. Currently there are more than 1500 people involved in the program, which involves meetings of existing social networks to discuss information that is provided to them about sources of energy and emissions. Groups meet eight times over a period of several months. In these meetings they provide data on their emissions profile, identify topics for further information, set goals to reduce emissions, and discuss problems meeting their goals. Initial results of the program show substantial impacts. Positive shifts were found on measures of environmental beliefs, knowledge of climate change mitigation, attitudes toward climate change topics and intentions to reduce emissions. More importantly, there were substantial behavioural impacts, with participants engaging in further information searches and discussions with others outside the intervention group, and average reductions in household carbon footprints of more than 30 per cent. The *Energymark* program represents a cost-effective intervention based on known principles of applied psychology, which has demonstrated a substantial impact on household greenhouse gas emissions. Further research is planned to examine the relative contribution of each of the intervention components to the overall outcomes, and to track long-term outcomes.

Keywords: climate change, behaviour change, positive action, applied psychology

Enhancing physical activity in the school context: Experiences of the collaborative planning method

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As physical activity among youth decreases at the age of 13 when they move from elementary to secondary school, it is important to find new possibilities for physical activity for them. This may be possible in a school context, if the recesses and the school yard facilities are

utilized effectively. In this study, the goal is to enhance the physical activity of secondary school students in the school context by using the collaborative planning method. In this method, students' autonomy is supported by allowing them to participate in the planning process on equal terms with other members of the school community and researchers. The aim of the study is to describe the planning process and to find out what activities students would be interested to engage in during the recesses and how they would improve the school environment. For collaborative planning, we used Optima, an internet based electronic platform designed for online collaborative learning and planning. Optima usernames and passwords were delivered to the students during the lessons, and possibilities to use Optima were offered during the school days. The students of one secondary school ($n = 300$) participated in the planning process. The data consists of the discussions in Optima, which were analyzed using quantitative content analysis. In addition, the main researcher wrote field notes to describe the planning process. The students were most eager to write comments about the activities during the recesses and about the schoolyard area. For example, a slide, wooden stairs, and additional balls were suggested. In the beginning, the students were not autonomous enough to participate actively, and therefore the help of the teachers and the student union were essential in the planning process. We faced the following challenges while using this method. Firstly, to participate, students need to feel that is safe to use Optima. Secondly, they need to feel that their opinions are listened to. Thirdly, students perceive working in Optima as a school task which has to be done during the school days. These factors need to be considered when using this collaborative planning method in the future.

Keywords: *physical activity, collaborative planning, young people*

Enhancing the meta-cognition of college students through their learning styles

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The goal of this study is to identify the learning styles of college students and to investigate how they enhance meta-cognition. This research also sought to identify gender differences between Intelligence Quotient (IQ), academic performance, meta-cognition and learning styles. This study focuses on the meta-cognition theory of John Flavell. It refers to higher order thinking which involves active awareness and control over the cognitive processes engaged in learning. In line with this research, it investigates the meta-cognition and learning styles of college students with the following: IQ, gender, and academic performance. The participants were randomly selected college students of the University of Santo Tomas (UST), Manila, Philippines. They were given the following tests: Barsch Learning Style Inventory, Meta-cognitive Survey, Mental Ability Test and Test of Academic Performance. This is a correlational study that generates quantitative and qualitative sets of data that were gathered from UST college students, and investigated the associations between the variables. Aside from the goal of the researcher to provide an output for the recognition of an individual with his or her potentials, this research helps educators to formulate a teaching methodology that is suited to the level of understanding of college students. It also provides data that will help the educators in designing an instructional material that is conducive to maintaining the learning atmosphere. This research widens educators' and students' beliefs of how IQ, academic performance, gender differences, and learning styles influence the meta-cognition of human beings by providing high quality formative feedback.

Keywords: *learning strategies, academic performance, intelligence quotient, meta-cognition, teaching*

Entrepreneurship from emerging economy to developed economy: Entrepreneurial absorptive capability of Chinese firms

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Ventures from emerging economies to developed economies may face two crucial

challenges. One is to adapt the capabilities obtained in the fast-paced emerging economies to the slow-paced developed economies. The other is to maintain the transformed and/or newly acquired capabilities' operation at full capacity to rapidly achieve leadership in developed economies. This paper aims to complement the theoretical framework developed by Yamakawa, Peng, and Deeds (2008) so as to map out a landscape of newly emerged international entrepreneurship studies. Using cases studies, we argue the importance of developing the entrepreneurial absorptive capabilities in developed economies to overcome the above difficulties. We would like to testify the construct of entrepreneurial absorptive capability of Chinese venture transnational entrepreneurship from emerging market to development market, which will highlight the future direction of transnational entrepreneurship. A series of propositions are accordingly proposed. Our theoretical model of entrepreneurial absorptive capability may map out a whole landscape of the newly emerged international entrepreneurship studies.

Keywords: emerging economies, entrepreneurship, absorption, international entrepreneurship, economic ventures

Environmental threats: New empirical findings on the role of personal involvement in the lay thinking about collective risk. The case of earthquakes in Romania and France

ERNST-VINTILA, A. (Universite de la Mediterranee Aix-Marseille II)

This empirical study focused on seismic risk and showed how social practices and personal involvement determine and explain the social representations of environmental threats in the lay thinking. Its originality consists in 1) distinguishing risk from hazard from a psychosocial perspective, and 2) completing an analysis of lay thinking about environmental threats at the collective level of explanation, a complement to the to the intra- and inter-individual levels often adopted in environmental psychology. Previous studies showed that practices are a determinant factor in shaping social representations and have suggested that

personal involvement is a major explanatory variable of lay thinking. Personal involvement (Flament & Rouquette, 2003) corresponds to an individual's relationship to a social object, such as threat, and is a combination of three dimensions: threat valuation, personal exposure to threat, and perceived capacity to act towards it. The study was run in France and Romania (low vs. high seismic risk countries) to compare the social representations of seismic risk among participants ($N = 486$) who had different levels of seismic experience/practice and of personal involvement. The study was conducted within the structural approach to the Theory of Social Representations (TSR), which enables formal comparisons among representations with the aid of its specific methodologies (here, we used the standard procedure of the Basic Cognitive Schemes model, Rouquette and Guimelli, 1992). A change in personal involvement in risk should trigger a change in some of the aspects of its social representation. Which aspects are affected? Results showed that in all groups, the social representation of seismic risk displayed salient normative aspects and low functional orientation. This structure explains the social representation's low efficiency in prescribing collective conducts (e.g., low engagement in collective prevention, educational campaigns, antiseismic retrofitting, etc.). However, participants who had seismic experience/practice expressed a more functional social representation, which was more practically oriented and stronger in guiding collective conducts. When, in addition to seismic experience/practice, participants also felt involved, their social representations were even more practically oriented. However, the effects of personal involvement on the structure of the social representation were only observed if participants had seismic experience/practice. In contrast, when participants felt involved but had no seismic experience/practice, personal involvement had no effect on their social representation of seismic risk. These empirical findings have practical consequences for the campaign strategies aiming at seismic risk prevention: 1) when individuals with seismic experience/practice increase their personal involvement, their social representation should exert a stronger guidance on collective risk-related conduct (they should be more likely to engage in collective risk prevention); and 2) in

contrast, the strategy consisting in increasing individuals' involvement (fear) without having provided them with sufficient antiseismic training, is ineffective.

Keywords: *environmental threats, lay thinking, seismic risk, social practices, personal involvement*

Environmental threats: New empirical findings on the role of personal involvement in the lay thinking about collective risk. The case of water quality in the South of France

ERNST-VINTILA, A. (Universite de la Mediterranee Aix-Marseille II)

This empirical study focused on the lay thinking about water quality and showed how social practices and personal involvement impacted the social representations of environmental threats (water pollution). Its originality lies in completing an analysis of lay thinking about environmental threats at the collective level of explanation, a complement to the to the intra- and interindividual levels often adopted in environmental psychology. Previous studies showed that practices are a determinant factor in shaping social representations, and suggested that personal involvement is a major explanatory variable of lay thinking. Personal involvement (Flament & Rouquette, 2003) corresponds to an individual's relationship to a social object, such as risk to water quality, and is a combination of three dimensions: risk valuation, exposure to risk, and perceived capacity to act towards it. A change in personal involvement should trigger a change in some of the aspects of the social representation of water quality. Which aspects are affected? The study compared the social representations of water quality among participants ($N = 96$) who had different levels of water quality practice: professionals who worked in the industrial area of the Berre Pond in Provence (southern France), and lay residents of that area. Participants' personal involvement was measured as a selection variable on a six-point Likert scale. The study was conducted within the structural approach to the theory of social representations (TSR), which enables formal comparisons among representations with the aid of its specific methodologies (cf. *infra*). The structure of the social representations of

water quality was analysed through a standard procedure developed within the structural approach of the TSR: prototypicality analysis (Vergès, 1992, 2002). Results showed that, in both groups, social representations of water quality displayed salient normative aspects but only low functional orientation. This structure explains the social representation's low efficiency in prescribing collective preservation conducts. However, in the professionals group, the social representation of participants who reported "high personal concern" with water quality was more structured than that of participants who felt "just as concerned as anyone else". In contrast, for lay persons, being concerned, or not, with water quality did not contribute to structuring the social representation. Thus, personal involvement structured the social representation and increased its prescriptive efficiency, but only in the professionals group (i.e., only provided that participants had established practices related to water pollution). These empirical findings have practical consequences for the campaigns of water quality reservation. Firstly, when individuals with established preservation practice increase their personal involvement, their social representation should exert a stronger guidance on their conducts (preservation of water quality, "best practices", etc); and secondly, in contrast, the strategy consisting in increasing individuals' involvement (concern) without having provided them with sufficient preservation training, is ineffective.

Keywords: *environmental threats, lay thinking, water pollution, social representations*

Evaluation of cognitive behaviour therapy group intervention for perinatal mood disorders

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Postnatal depression is the most prevalent mood disorder associated with childbirth and affects up to 15% of childbearing women. The aim of this study was to examine the effectiveness of a Cognitive Behaviour Therapy (CBT) group program on women diagnosed with a perinatal mood disorder. The program had traditional CBT

components as well as specific topics and themes pertinent to perinatal mood disorders designed to target negative cognitions and challenge distorted motherhood-specific beliefs. A convenience sample of women admitted to a private mental health hospital was used. The sample consisted of 87 participants (completed data sets) throughout 2007, 2008 and 2009. Groups were conducted every six weeks with an average of ten women per group. The program consisted of psychoeducation topics for one and a half days per week and one session per week with a nurse therapist. Participants completed three self-report questionnaires pre and post the five week treatment program. Three aspects of patient functioning were measured: depression (Edinburgh Postnatal Depression Scale, EPDS), anxiety (State-Trait Anxiety Inventory, STAI) and the impact of postnatal depression on their primary relationship (Abbreviated Dyadic Adjustment Scale, ADAS). An analysis of the data for 2007, 2008 and 2009 revealed that the program made statistically significant differences across two of the measures. Specifically, the women's depression and anxiety levels were significantly reduced after completing the program. No significant improvement was found in the women's level of adjustment in their primary relationship. The results support the effectiveness of the CBT program in treating depression and anxiety in women with perinatal mood disorders. A Cognitive Behaviour Therapy program which includes topics relevant to perinatal mood disorders and in particular distorted motherhood-specific beliefs has the potential to assist women suffering from antenatal and postnatal depression. In addition, presenting the program in a group format can assist a greater number of women when resources are limited. Possible explanations for non-significant results will be discussed.

Keywords: *postnatal depression, cognitive behavioural therapy, perinatal mood disorder, motherhood-specific beliefs, state-trait anxiety inventory*

Evaluation of competence development in professional coach training

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This study focuses on specific characteristics and soft skills of counsellors. It uses an evaluative approach to measure their development over the course of training. The study focus lies in identifying personality changes and social skills related to training. The study does not primarily concentrate on the increase of specific knowledge. Up to now, training evaluations have mostly been based on participants' self reports following events. To catch a variety of developmental aspects, the applied instruments in the presented evaluation model cover a wide range of methods and represent a framework for evaluating further education and training in a more complex way. In this study we use a multifaceted form of examination and we refer to different theoretical concepts, for example, knowledge and problem solving, personality and emotion theories. All the Instruments intend to collect objective data instead of subjective self-assessments by the participants. Results show that there are changes of personality traits and tendencies of improved recognition of affects – in addition to receiving the intended coach-qualification. Finally, we believe that our generic, yet multifaceted, model to evaluate coach-training produces valid findings. It highlights the improved qualifications as well as the human development of the participants during the course. It therefore enables assessment of the quality of such training using a broader approach than usual.

Keywords: *counselling training, training evaluation, training quality, counselling skills, counsellor knowledge*

Evaluation of programs designed to improve literacy development in at-risk children: The case for longitudinal assessment

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We examined literacy skill development in at-risk children, and determined how this varied with native language and with participation in "school readiness" programs designed to foster academic readiness in children aged 0-5 years.

Of particular interest was how conclusions regarding program effectiveness derived from examination of single grade levels compared with those derived from studying developmental trajectories. A longitudinal design was used to assess literacy skills of 168 native English speakers and 229 English language learners in Kindergarten, Grade 1, and Grade 3. All literacy assessments were conducted in English. Cluster analysis was used to group children according to the similarity of their school readiness program history. Separate developmental trajectories were mapped out for each of these groups. English language learners lagged behind native English speakers in their literacy skills at Kindergarten. Children with different school readiness program histories differed little in their literacy skill levels at Kindergarten. However, the groups had markedly different developmental trajectories: sizable group differences emerged in Grade 1 and were maintained through Grade 3. Furthermore, some clusters of school readiness programs had steeper developmental trajectories for English language learners than for native English speakers, helping to reduce the literacy gap for English language learners as the children matured. Programs designed to foster academic readiness can accelerate literacy development in children aged 0-5 years, and can help English learners overcome the challenges they face relative to native English speakers. Longitudinal assessments are particularly valuable in documenting the impacts of these programs.

Keywords: *literacy, children at-risk, longitudinal assessment, child assessment, program evaluation*

Evaluation of the effectiveness of cognitive behavioral therapy in improving college students' self-esteem and self-efficacy

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The present study examined the effectiveness of cognitive behavioral therapy (CBT) in improving college students' self-esteem and self-efficacy. This research was based on a pre-test/post-test control group. Twenty four college students, referred to a psychological clinic at Ferdowsi

University of Mashhad, produced low scores in Coopersmith Self-esteem Inventory screening determining attendance in group CBT, were randomly assigned to the experimental and control groups (eight females and four males in each). The experimental group received eight weekly 90 minute sessions of cognitive behavioral therapy while the control group received no specific intervention. The measurement scales used were the Self-Esteem Scale (Coopersmith, 1972) and the Self-efficacy Inventory (Shere et. al. 1982). After controlling for baseline scores, the experimental group participants demonstrated significantly higher levels of self-esteem and self-efficacy compared to the control group. These results suggest that group CBT can enhance self-esteem and self-efficacy in college students.

Keywords: *cognitive behavioural therapy, self-esteem, self-efficacy, college students*

Evaluation study on the effect of the "Temporary Stop To See" campaign: Recent findings

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Drivers in our country have "biased" Accident Cause Concept (ACC) in that they regard "speeding" and "drunk driving" as most frequent causes of accidents regardless of the fact that the common causes of accidents are "perceptual failures". The writer considered that, to change drivers' dangerous behaviour into desirable (safety) behaviour, we must change their ACC because human behaviour is determined by someone's cognition (concept) of a situation where they live as Koffka (1935) advocated. To make drivers notice the factual cause of accidents, the "temporary stop to see" (TSTS) campaign developed in 1988 by the writer was conducted at lecture meetings in two transportation companies. Drivers of the companies served as subjects. Changes of ACC were surveyed by a questionnaire listing fifteen road violations before and after the campaign. The writer first informed drivers only of "the facts of occurrence of accidents" and then made them ponder the "causes of accidents, in other words, the kind of worst violations to be removed from the road". After the pondering,

drivers noticed that looking carefully and observing precisely were the effective measures and realized the importance of perception. Drivers were asked by the writer how to achieve this. They pondered again and replied. "By making a temporary stop, we can look and attend surroundings precisely". The biased ACC was modified into an unbiased (factual) one by the TSTS campaign. Drivers were motivated to practice a temporary stop at the intersections without a signal to avoid perceptual failures. Reduction of accidents was attained in the two companies following a desirable change of ACC and behaviours. It was hypothesized that it was important for drivers to form a factual ACC to motivate them to perform a temporary stop which was considered an essential prerequisite to a successful perception of surroundings. Based on the campaign activities, a factual ACC was formed, and desirable driving behaviour developed. As a result, accidents have been reduced in the two companies.

Keywords: *accident cause concept, perceptual failure in driving, car accident, driving behaviour, safety*

Evidence based management – an effective approach for public agencies?

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Evidence Based Management (EBM) means using the best facts available to make critical decisions. A lack of EBM is proposed to negatively affect organizational productivity. However, this hypothesis relies on poor evidence itself. Moreover there is no widely accepted model of EBM in the literature. Consequently we propose a theoretical framework of EBM and investigate its job-related outcomes. We assume that EBM appears in terms of EBM bases, to be conceived as foundation issues for EBM and EBM practices, which implies making decisions on the basis of the latest research. Specifically, we examined whether organizations with common use of EBM are more successful than those with rare application of EBM in respect to established job-related variables (job satisfaction, commitment, well-being and work engagement). The sample

comprises of managers and employees of public organizations. Our hypotheses were tested by means of a multi-source (questionnaire and archival data) multilevel (managers and employees) design. We used a questionnaire to measure EBM practices and EBM bases on the one hand and common job-related variables on the other hand. Data was analyzed using hierarchical linear models (HLM). To analyze postulated main effects, structural equation modeling was applied. Data analysis provides evidence that EBM emerges in terms of foundation issues for EBM and EBM practices. Organizational EBM-aspects show positive relations between job-related as well as organizational outcomes. Our findings show that EBM leads to positive outcomes in terms of employees' attitudes and organizational outcomes. Increasing EBM bases of organizations on the one hand and increasing applications of organizational EBM practices on the other hand result in positive job-related outcomes. These findings underline our suggestion that EBM presents best management practice. Future research should aim at identifying critical organizational and personal determinants that promote EBM.

Keywords: *evidence-based practice, organisation practices, job satisfaction, job-related outcomes, well-being*

Examining the relationship between admission to a sub-acute mental health service and hospital admissions

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In many Western countries, there has been an increasing shift away from reliance on acute inpatient forms of mental health treatment to community mental health services. However, there have been some concerns that there is a significant gap between community and acute mental health services along the continuum of care. In Victoria a model of short sub-acute residential care has been piloted in an attempt to avoid hospital admissions or reduce their length. These facilities, named Prevention and Recovery Care (PARC), are also designed to be an early discharge option for people leaving acute

inpatient units. The aim of the current study was to evaluate the effectiveness of a PARC in reducing acute inpatient days, crisis team contact and improving the mental health of people who use the PARC. Data from 182 clients who had used a PARC between January 1st 2006 and June 30th 2008 were extracted from the mental health database. Client inpatient days, crisis team contact and mental health functioning were measured for the 12 months before a client's admission to PARC and for the 12 months post admission. Independent t-tests were used to analyse the data. Results demonstrated that client mental health significantly improved across the time of their admission to PARC (a maximum of four weeks). Inpatient days and crisis team contact were both significantly lower in the 12 months post PARC compared to the 12 months prior to PARC. Whilst this study is preliminary in nature, employing correlational data and lacking a control group, the robust effects in a relatively large sample are very encouraging. The findings offer considerable early support for the PARC model of mental health care as an effective treatment option in acute episodes of the low prevalence disorders.

Keywords: *community, mental health, residential care, acute inpatients*

Experts in their own lives: Engaging with children in family and domestic violence service provision

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The aim of this research was to obtain insight to children and young people's experiences of separation and Refuge Services in order to inform future services. Metropolitan Refuges in Perth were approached to gain a sample for the consults. Consent was gained through the Refuge as well as guardians, and the children were explained the process in child friendly and age appropriate language. The consults were undertaken by two female staff members, and were unstructured group consults. This method was chosen so as to not guide the responses, and to combat issues of power arising between children and adults. Seven Refuges participated in the consultation process, resulting in 32

children being consulted, aged three to 14 years old, including 19 girls and 13 boys. Each child experiences leaving home and Refuge life differently. Children and young people experiencing family and domestic violence were eager to share their experiences. Responses fell into broad categories including; leaving home, arriving at the Refuge, living at the Refuge, staff and services and leaving the Refuge. Overall children and young people consulted were happy to be in Refuge as it provided a safe space for them. However there were many challenges to living in a Refuge, such as sharing small spaces and living closely with other families. It is vital to consult with children when setting out service principles for them. It acknowledges their voice and authority in their own lives, and works to empower them, particularly in the case of family and domestic violence. Children have the right to be heard.

Keywords: *young people, refuge services, domestic violence, children's empowerment*

Exploring relationships between job loss and obsolescence: Directions for future research

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The purpose of this paper is to address how job loss among professionals may be related to the obsolescence of their knowledge and skills. While both job loss and obsolescence have been subject to research over many years, little is known about the relationship between them. This study reviewed, analyzed and integrated previous data in order to identify potentially fruitful directions for future research. Data collected primarily from technical professionals who experienced job loss included survey instruments measuring a variety of constructs, including professional obsolescence. Other measures related to the possible effects of job loss were also utilized. These included the Job Preference Inventory by Williams (1965) as an index of flexibility or rigidity with respect to occupational role and the self-assurance scale from Ghiselli's (1971) Self-Description Inventory to measure self-esteem. The length of time out of work was found to be positively related to professional obsolescence ($r = .49, p < .001$) as

well as to occupational rigidity ($r = .43, p < .001$). However, only among those with high self-esteem was obsolescence positively related to occupational rigidity ($r = .48, p < .01$). Long-term unemployed professionals experience higher levels of obsolescence as well as occupational rigidity, but there is a clear question of causality. Does the length of time professionals remain jobless result in greater obsolescence as well as occupational rigidity? Alternatively, are professionals who are up to date and more flexible in the type of job they are willing to accept, re-employed faster? It is likely that both occur, but a clearer answer to the question of causality requires longitudinal research. Obsolescence was related to occupational rigidity only among high self-esteem professionals. The role of self-esteem as a moderator in the relationship can be compared to Korman's (1966) results on occupational choice. The findings with self-esteem highlight the need for future research to address the complex role of personal characteristics in job loss.

Keywords: *obsolescence, job loss, job preference inventory, self-esteem, occupational rigidity*

Exploring the Chinese-Filipino social identity: A social representational framework

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The research explores self-perceptions and social identity representations of the Chinese in the Philippines using the social representations framework. In particular, it seeks to understand how Chinese culture and personal and group migration history are translated into the ethnic minority's self-construal and social identity. Additionally, it investigates the influence of various communication processes (education, linguistic ability, social interactions and adherence to customs and traditions) as well as individual (age and gender) and environmental attributes (migration status and parents' cultural background) in self and social identity development. It will likewise explore Chinese in the Philippines' subgroup's social representations. A combination of qualitative and quantitative methods will be utilized: in-

depth interview of ethnic Chinese respondents will be done in Study 1 to elicit social representations of the social identity as well as sub-group classifications; survey questionnaires will be fielded in Study 2 with the aim of understanding the variances in the social representations of the subgroups, as well as the attitudinal link between self- and social identity. Chinese-Filipino social identity representations, self-referent labels, customs and traditions, historical events/people salient in Philippine, China and Chinese migration to the Philippines' histories, sub-groups identified within the migrant group. Subgroups are differentiated by their place of origin in China and length of stay in the Philippines. Phase 2 results are to follow. Communication processes targeted in the study are seen to influence self- and social construal. Age at migration and migration status are likewise factors that affect self-construal and social identity.

Keywords: *self-perceptions, social identity, migration, self-construal*

Exploring the efficacy of an integrated child and family service model: Child development and behaviour outcomes

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While integrated service models are widely viewed as optimal for intervention in socially disadvantaged communities (Ofsted UK, 2009), their efficacy has not been investigated in an Australian context. This study reports child outcomes in a newly developed integrated service. Participants were mothers ($N = 18$) and their 27 preschool age children referred to an integrated service in Sydney, Australia. Child development using the Battelle Developmental Inventory and an early literacy task was assessed at time of recruitment on 18 children (in their mother's care) and again nine months later ($n = 16$). Mothers also completed an overall rating of behaviour (MOR) concerning their preschool age children (whether they were in maternal care or not); ratings ranged from 'much easier than average' to 'much more difficult'. At Time 1, 15

of 18 children (83%) were in the pass range on the Battelle and one child each scored in the 'borderline', 'clear' or 'serious' indication for referral categories. The most risk apparent sub-domain was Communication ($n = 9$ in 'borderline' or 'refer' categories) followed by Cognitive ($n = 7$), Personal Social ($n = 4$), Adaptive and Motor ($n = 3$ per domain). Early literacy scores revealed that most children ($n = 16$) were within age level expectations or above. A total of five (16%) of 27 of children were rated as "more difficult than average" (MOR) at Time 1. Analysis of follow-up data at Time 2, nine months after service entry found no significant change in children's developmental categories, nor in early literacy scores. There was however, a significant change in regard to mothers rating of child behaviour (MOR), indicating a perceived improvement in child behaviour from Time 1 to 2 ($p = .015$). These results indicate the difficulties in capturing developmental change in young children involved in multifaceted integrated service initiatives using more formal measures of development. However, maternal perceptions of child behaviour were more sensitive to change over a relatively short time period. Longer term follow-up of children engaged in such services is desirable, as well as the use of measures sensitive to change across key areas of development.

Keywords: child behaviour, social disadvantage, child development, maternal perceptions, literacy

Exploring the link between self-concept, adjustment and sport performance

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The present paper aims to explore the link between self-concept, adjustment and sports performance. The study also focuses on assessing the self-concept and adjustment levels of Indian female wrestlers that will impact on their sports performance and identify the implications of these for the drive to enhance sports performance as wrestling is very popular as one of the oldest sports of India, so numerous research studies have been done on it over the years. Although many aspects of wrestling

related to physical powers have been investigated by the researchers yet few of the studies undertaken to date have specifically concerned female wrestling and implication for performance enhancement. To achieve the same, 112 Indian female wrestlers were selected for surveys. These subjects included those wrestlers who won medals at states and national levels and also those who have not won medals. The Self-concept questionnaire conducted by Raj Kumar Saraswat (1984) was used to measure the physical social, temperamental, educational, moral and intellectual aspects of self-concept. Adjustment inventory by Sinha and Singh (1980) was used to measure all the dimensions of adjustments i.e. home, health, social, emotional, educational and total adjustments of the subjects. Results show that there is significant difference in the level of self-concept and adjustment between national medalist and national non-medalist Indian female wrestlers. A significant difference has also been recorded between state medalist and state non-medalist female wrestlers as far as adjustment is concerned, whereas no significant difference has been found in their level of self-concept. National and state medalist female wrestlers have been found to be significantly different from each other both in their level on self-concept and adjustment. From the results of the present study it has become clear that on the psychological predispositions selected for the study, they have positive relationships with each other as well as with achievement. So, it has become necessary that female wrestlers must be conditioned not only physically but psychologically as well. So, the coach or the psychologist attached with the team must take care of level of self-concept and level of adjustment. He must also be acquainted with the technique of managing the hyperactivity of all these psychological variables. Thus, it becomes important that a coach while giving coaching must also counsel the player for their psychological preparations.

Keywords: female wrestlers, sport, sport psychology, adjustment, self-concept

Exploring the nature of obsessive compulsive checking

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While people with Obsessive Compulsive Disorder (OCD) may present with a range of obsessions and compulsions, for many, excessive, ritualised, time consuming checking behaviours and related obsessions are dominant expressions of the condition (e.g. Fullana et al., 2009; Samuels et al., 2006). Sub-typing by predominant symptom presentation has been suggested to be important since qualitative differences between OCD subtypes mean that when conducting research into the origin, nature and treatment of OCD, findings may not be generalisable across the different subtypes (McKay et al., 2004). In this study we investigated the nature of Obsessive-Compulsive Checking (OC-Ch) by examining the type and frequency of obsessions and compulsions experienced in a large sample of people diagnosed with this subtype. As part of a comprehensive pre-treatment assessment the Yale-Brown Obsessive Compulsive Scale and checklist (Goodman et al., 1989) were administered to 50 people with OC-Ch subtype. Additionally, exploration into the nature of these phenomena was made by examining the prevalence of features such as pathological doubting, indecisiveness, avoidance behaviours, insight and pervasive slowness. The results of this phenomenological exploration are described and presented. Overall, participants met criteria for severe OCD that was causing a moderate to severe level of interference in most areas of their lives. All participants reported experiencing checking compulsions and aggressive obsessions, with high levels of endorsement for all checking compulsions and fears and obsessions about harm to self or others. Other features prominent in this group were avoidance, obsessional slowness, doubting and indecision. It is argued that enhancing our knowledge of the nature of specific OCD subtypes, such as OC-Ch may assist in determining disorder related pathogenesis, maintaining factors, prognosis and treatment. Identifying the underlying variables that mediate the concerns experienced by people with OC-Ch subtype could enable the development of

treatment strategies to address these most frequently reported concerns and features.

Keywords: *obsessive compulsive disorder, checking compulsions, aggressive obsessions, pathological doubting, avoidance*

Exploring the relationship between ideal affect and emotion regulation

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According to the Affect Valuation Theory (Tsai, Knutson, & Fung, 2006), Chinese people differ from North Americans in the types of emotions they ideally want to experience (known as ideal affect). Compared with Americans, Chinese value more low-arousal-positive affect (LAP) such as calmness but fewer high-arousal-positive affects (HAP) such as excitement. The present study explored the relationship between ideal affect and emotion regulation among Chinese youngsters in order to test whether the type of ideal affect serves a motivational purpose to guide our way to regulate emotions. The sample consisted of 800 high school and university students residing in Hong Kong. They first completed a set of questionnaires on ideal affect and general emotion regulation strategies, followed by rating emotional feelings and expression in response to six hypothetical scenarios. Preliminary results ($N = 464$) demonstrated that individuals who value high-arousal- positive emotions (HAP) were less likely to use suppression whereas individuals who value low-arousal-positive emotions (LAP) tended to use more cognitive reappraisal. In response to the six hypothetical scenarios, individuals with higher level of HAP expressed their emotional feelings to a greater extent, and were less likely to avoid subjective emotional feelings than did those with LAP. Findings of this study reveal that the type of emotions that we want to feel may partly affect the types of strategies that we use to regulate emotions. It provides important implications to educators in order to understand mechanisms of emotion regulation among young people.

Keywords: *emotion regulation, affect valuation, low-arousal-positive affect, high-arousal-positive affect, regulation strategies*

Exploring the social and cultural factors of suicide in Sikkim

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The objective of this study was to explore the role of social and cultural factors as mediators in suicide as a phenomena occurring in the North Eastern region of India. A psycho-autopsy approach was adopted in which narrative as a tool of data collection was undertaken. The sample ($N = 35$) for this study comprised of close family members of suicide victims. For analyzing the data, Structural Model Analysis was adopted. Data reveals that changes in structures level (changing value system, individual need and desire, unemployment, low education, changing family dynamics etcetera) leads to psychological process (stigmatization, guilt, depression isolation, alienation) triggering suicide. Thus, the paper entails detail understanding of the function of these variables in a specific cultural context.

Keywords: cultural context, suicide, psycho-autopsy approach, structural model analysis

Exploring the wellbeing of students studying at an Australian university

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Mental health problems are one of the leading contributors to the burden of disease amongst Australians, with anxiety and depression accounting for a significant proportion of this relationship. Over the last, decade with the internationalization of higher education, the wellbeing and mental health of university students has increasingly become a cause for concern for university management internationally. Student wellbeing and mental health can have considerable impact on academic performance and student and university community safety. The present study sought to examine the prevalence of mental health problems and general wellbeing amongst university students enrolled at one Australian university, and to explore how stress impacts on

student mental health and wellbeing. A total of 1193 university students participated in a study exploring the impact on stress on student wellbeing, completing measures on general distress (Kessler Psychological Distress Scale), mental health (Depression, Anxiety, Stress Scales), and quality of life (WHO Quality of Life – Brief) under conditions of low versus high stress (varied by proximity to examinations). Overall, the findings revealed that with increasing stress, students exhibited increased levels of psychological distress, anxiety, stress, and depression, and quality of life was impacted. Factors such as gender, first language (English versus other), and student status (Local versus International) and financial security also impacted on psychological distress and quality of life. Understanding the factors impacting on the mental health and wellbeing of university students with diverse cultural, language and life style backgrounds are relevant for the provision of educational, psychological and health services to university students. Implications of the findings of this research for service provision to enhance student wellbeing and mental health are discussed.

Keywords: university students, well-being, mental health problems, student health, academic performance

Facial expression analysis using motion capture and generalized procrustes analysis

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Human facial expressions provide various signals for social interaction. In many studies on facial expression, Facial Action Coding System (FACS) which was invented by Ekman & Friesen (1976), has been used. However, most of the studies that employed FACS focused on 'static' facial expressions (that is, photographed facial expressions), instead of 'dynamic' expressions, since conventional FACS methods render it difficult to treat dynamic facial sequences. The present study aims at solving these difficulties by

using a motion capture system and Generalized Procrustes Analysis (GPA). GPA converts coordinate data of landmark locations into multivariate normally distributed value that can be statistically analyzed. Two Japanese undergraduate students provided the facial time sequences. Prior to each recording, the positions of 19 feature points were marked by blue dots on each face to define the locations and shapes of the eyes, mouth, eye brows, etcetera. Each participant played the UNO game with two opponents for a few minutes. A facial sequence of each participant during the game was captured using two video cameras (30 frames per second; Participant 1, 9846 frames; Participant 2, 8148 frames). Stereo camera calibration and image rectification were performed based on checkerboard pattern using OpenCV. The feature points were tracked over all frames on each of the movies using a program written by the authors. The 3-Dimensional coordinates of the feature points of each frame were obtained by triangulation. Each captured face differed in location and orientation. In order to standardize them, we performed GPA on the facial feature points separately for each participant. Using the GPA, each face of each frame was represented as 53 dimensional (19 x 3 - 4) normally distributed values. In order to reduce the dimensions, principal component analysis (PCA) was performed for each participant. Results indicated that the contributions of the first two principal components (PCs) were relatively large for both participants (Participant 1: PC1, 37.0%, PC2, 8.7%; Participant2: PC1, 23.6%, PC2, 6.1%). In order to interpret these components, $\pm 3SD$ images of the first and second PCs for each participant were plotted. For both participants, the first PC was found to be related to mouth opening indicating that the first PC was linked to smiling. The second PC was related to eye blinking for Participant 1, and was related to eyebrow movements for Participant 2. These results suggest that the combination of motion capture and GPA is an effective method to analyze dynamic facial expressions in social interactions.

Keywords: *facial expressions, human faces, facial action coding system, dynamic expressions, social interaction*

Factors influencing the intention to be an entrepreneur

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The fact of an ever-growing unemployment rate in Indonesia dictates that the country should work hard to boost the number of its entrepreneurs. One way to overcome the problem of unemployment is by enhancing the spirit of entrepreneurship in young people. This research is intended to explore the direct and indirect factors affecting the intention to be an entrepreneur among students. This study will emphasize nine traits of entrepreneurship according to Sukardi (1991), personality types from Miner (1996) and self-efficacy notions (Bandura, 1977) which will be used to describe entrepreneurial behavior. Intention was assumed to take hold of emotional factors that influence behavior; intention is an indicator of how large one's effort is to try to perform intentional behavior (Ajzen, 1991). In the context of entrepreneurship, intention was identified as the important property for establishing an organization (Katz & Gartner, 1988) and as a predictor of a new reliable enterprise (Krueger, 2000). This research involves 125 students from the Faculty of eEngineering of Atma Jaya University in Jakarta. Questionnaires and accidental sampling were used. Analysis of structural equation model of Linear Structural Relation (LISREL) indicated that: (1) personality types from Miner had direct and significant impact on self-efficacy, (2) personality types from Miner had direct and significant impacts on the intention to be entrepreneur, (3) self-efficacy had a direct and significant impact on intention to be entrepreneur, (4) the nine characteristics of entrepreneurship had direct and significant impacts on intention to be entrepreneur. The result of this study is similar with experts' opinions that to be an entrepreneur, certain personality characteristics are needed and self-efficacy is important.

Keywords: *intention, self-efficacy, entrepreneurship, personality types, self-efficacy*

Factors related to intellectual media consumption: Behavior of undergraduate students in Bangkok

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The aims of this study were to examine the causes of unsuitable behavior with media consumption and to study the relationships between personal factors (media literacy, media effect awareness, inquiry and self control) and social factors (socialization from family and influence of peer groups) related to intellectual media consumption behavior. A further aim was to investigate the predictive factors of intellectual media consumption behavior of undergraduate students. Qualitative data was collected via in-depth interviews and focus groups from 30 key informants consisting of scholars, persons involved in child and adolescent development and undergraduate students. Quantitative data was collected from a sample of 481 undergraduate students via multi-stage random sampling. The data was collected by questionnaires and analyzed by Pearson Product Moment Correlation Coefficient, Stepwise Multiple Regression Analysis and One-Way ANOVA. Both personal factors and social factors were found to cause unsuitable behavior with media consumption. Students did not have media literacy, inquiry, media effect awareness and self control. They were induced to consume unsuitable media by peer groups and were unsuitably socialized by family. The educational sector did not support students' media literacy and thinking system, and they were able to easily access unsuitable media. Media producers lacked ethics and entrepreneurs and government officers did not have social responsibility. Self control, media literacy, inquiry, media effect awareness, influence of peer groups and socialization from family had positive correlation to students' intellectual media consumption behavior at the .01 significance level. Finally, media literacy, self control, inquiry, and influence of peer groups were the co-predictors of intellectual media consumption behavior that could predict 40% at the .001 significance level. According to the results, organizations, guardians and administrators/lecturers in universities should

support and promote socialization of their students so that they have media literacy, self-control and inquiring behavior from a young age.

Keywords: *intellectual media consumption, undergraduate students, media, media effect, Bangkok*

Family carer attitudes toward medications are related to self-reported medication adherence amongst people with mental illness

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Others' beliefs influence our own attitudes and behaviours. Parents in particular can affect their children's behaviour by influencing their attitudes and cognitions. The aim of the present study was to explore the beliefs that family carers had toward medications and to determine whether these were related to the attitudes and medication adherence of their family member with mental illness (consumers). Forty adult carer-consumer dyads independently completed the Beliefs about Medicines Questionnaire (Horne, Weinman & Hankins, 1999), the Drug Attitudes Inventory (Hogan, Awad & Eastwood, 1983) and measures of medication adherence. Carer and consumer attitudes toward medications were strongly positively correlated. Further, carer attitudes were significantly correlated with consumers' self reported adherence. However, consumers' own attitudes were more strongly related to their adherence ratings. Consumers and family carers had high levels of awareness of each other's attitudes toward medications. The moderate relationship between carer and consumer attitudes highlights the need to target psycho-educational activities to increase adherence at both carers and consumers. There is also a need to better understand whether attitude transfer between carers and consumers is a two-way process.

Keywords: *medication adherence, caregivers, beliefs, family, medication*

Family environment and career orientation among boarders and day scholars

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The present study was an attempt to learn about the Family Environment and Career Orientation of Boarders and Day Scholars. The sample of the present study comprised of 400 adolescents equally divided into four different grades (ninth, tenth, eleventh and twelfth) and Boarders and Day Scholars. All the subjects were selected from the Public Schools of Mussourie, Uttarakhand. Individual testing was done by using quota random sampling technique and administering the Career Development Inventory: School Form (Super and Thompson, 1981) and Family Environment Scale (Moos and Moos, 1986). All the subjects were matched on socio-economic status. A four by two factorial design was used to draw inferences. Means, standard deviations and analysis of variances were computed to interpret the raw data. The results of the study revealed that Boarders and Day Scholars differed significantly on Family Environment and Career Orientation. The main effect of school residency was found to be significant on only three dimensions of Family Environment namely, Expressiveness, Active Recreational Orientation and Moral Religious emphasis. Boarders showed higher levels of these characteristics in their families as compared to Day Scholars. On the World of Work and Career, Boarders were found to be significantly higher on Career Planning, Decision Making, World of Work and Career Development Knowledge, while Day Scholars scored better on Career Exploration and Career Development. The interaction of grade and school residency was found to be significant with respect to Career Orientation dimensions. Boarders were found to be higher on Career Orientation than Day Scholars. Boarders of the 9th and 12th grades experienced more conflict than Day Scholars of these classes. The study concluded that Boarders and Day Scholars differed on some Family Environment and Career Orientation dimensions among adolescents. All the obtained findings will be discussed in reference to the Indian context.

Keywords: *career orientations, career development inventory, school residency, family environment, decision making*

Feelings and effectiveness: Elementary reading teachers

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This research compares four types of fourth grade reading teachers' feelings: for profession as a teacher, for school as a group, for enthusiasm on teaching, and for responsibility as a teacher; and analyzes relationships of these feelings with factors regarding instruction or teaching activities; and reveals how the teacher feelings affect students' reading interests and achievement. Using an international educational database, PIRLS 2006 Teacher Questionnaire, the sample of 1,838 elementary reading teachers in eight units were gathered from China, Taipei, England, France, Germany, Hong Kong, Russia, Spain, and the United States. Descriptive methods, tables and figures, ANOVA, and Partial Correlation (removing influences of teachers' age, teaching years and gender) were used. Elementary reading teachers' feelings for responsibility were the highest among the four types, and their feelings for the profession as a teacher and for school as a satisfied group were also very high, but feelings for enthusiasm were low in the eight units. Reading teachers with better feelings, especially those higher scores on profession as a teacher and school as a satisfied group, had negative correlations with their time on maintaining discipline in classrooms; but they tended to teach more reading contents; had more teaching methods or forms in instruction procedures; asked students to answer questions, discuss, write, and work on projects following reading, more; gave more help in developing students' reading skills and strategies; designed more methods to help students falling behind to catch up with whole class; and met and sent messages to parents to get parents' assistances, more often. This study also discusses the large differences of correlations between teachers' feelings and their use of assessment methods, computers and libraries among the participating countries and this needs further studies.

Research on teachers' feelings is important as they are strongly related to instruction and students' learning and development effectiveness. This cross-cultural study using PIRLS is a start trial for further research. Based on different cultures and reading teachers' education and training levels, this study also suggests how to promote teachers' positive feelings, and provide meaningful references for further studies in reading instruction and teacher education fields.

Keywords: *teacher education, teachers' feelings, teaching*

Forensic psychological assessment of female victims of domestic violence: A differential study

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It is very important that the expert psychological evidence in cases of abuse is prepared in a rigorous and scientific way, to help expert psychologists take appropriate decisions. Among the many variables or criteria to be considered in the assessment are: depression, self-esteem, anxiety, personality, social support, adaptation, symptoms of post traumatic stress, distorted thoughts, relationships, communication within a relationship, criminal and psychopathological records, motivation to report, consumption of toxic substances, psychological and psychiatric treatments etc. In our investigation we wish to deliver other psychological variables that have been demonstrated to have valid content and discriminant properties. The sample was formed of 101 women, 37 in a control group (group of mothers from a training workshop on social skills), 29 in a clinical group (patients from clinical consultations) and 35 in a forensic population (female victims of abuse by their partners). The aims were: 1) To study whether there were differences between the groups (clinical, forensic and control) in the variables or criteria described, and 2) to identify the predictive factors by performing a discriminant analysis. The ATRAMIC questionnaire (Armas-Vargas, 2007) was used to assess 22 variables of personality. The Self-Esteem Questionnaire (CAE Questionnaire; Armas Vargas, 2004) was used to

assess four factors of self-esteem including: 1) The assessment of: "Himself/Herself"; 2) that perceived or held for "Others"; 3) the Feeling of "Incompetence/Uselessness"; 4) the Feeling of Inferiority or of "Negative Comparison with Others". Using the discriminant function, 86% of the control group and the female victims of abuse group were correctly classified. The variables with the highest discriminant power were: Self-Control when Lying, Failure to make Adjustments for Lies Told, Selective Privacy, Assertiveness, Transparency, Social Desirability, Guilt, Self-Criticism, Being Consistent, Being Coherent, Empathy and Insecurity. Using the discriminant function, 92% of the cases in the control and clinical groups were correctly classified. The variables with the highest discriminant power were: Failure to make Adjustments when Lying, Fear of Rejection or Criticism, Control, Self-Criticism, Being Consistent, and from the CAE, the variables "I-self" and "Others". On the basis of the groups used in this study, we found sufficient differences using the ATRAMIC and CAE instruments.

Keywords: *expert psychologists, forensic assessments, female victims of abuse, assessment instruments, expert decision-making*

Formal volunteering: Can working for no money still be called work in occupational psychology?

METZER, J. (University of South Australia)

Results of several studies of motivation, stress and job satisfaction of various groups of formal volunteers are examined with the aim of determining similarities of volunteering and paid work. The applicability of data from these studies to two major models, specifically, the Demand-Control-Support (DC-S) and the Job Demands-Resources (JD-R) Models in the literature on occupational psychology are critically examined. Outcome variables include mental health, stress and job satisfaction. Some longitudinal study results are reported, analysing the benefits of unpaid work for volunteers in the context of employment and unemployment in paid work. Both models are supported moderately well by data from the multiple volunteer group studies examined. There is

some evidence of benefit to volunteers in terms of mental health and wellbeing. A new construct of connectedness in volunteers emerges as a contributor to the variance in some of the outcome variables. Outcomes of volunteer work studies suggest that there is good similarity between paid and unpaid work, probably through their multiple benefits for volunteers and the paid workers. Support for the DC-S and JD-R models in volunteer studies suggest that formal volunteering should be considered to be another form of work.

Keywords: job satisfaction, job demands-resources model, volunteerism, unemployment, well-being

Formative evaluation of the Japanese version of the DVD, "Bandura's social cognitive theory: An introduction", and its application to the development of learning and instructional guides

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The aim of this research was to investigate the effects of verbal and visual presentations of the DVD, "Bandura's social cognitive theory: An introduction", on learning its content, in order to develop effective Japanese captions and learning and instructional guides. Eighteen graduate students, naïve about Bandura's theory, responded to multidimensional evaluation tests using texts and images. Formative evaluation and revision of Japanese captions and test items were repeated in three cycles. Results are discussed from a viewpoint of interactions between senders and recipients of information. Recipients chose "images combined with captions" and "images" more often than only "captions" as the main information for judging the most impressive scenes. They rated all the topics as interesting. Recipients scored highly in the correct response comprehension tests on aggressive modeling in the correct-incorrect judgment test and moral disengagement in the image-text matching test. They also had high correct responses in the multiple-choice test for major methods of developing efficacy and major processes of efficacy. However, correct response rates decreased in the image-text matching test, possibly because the recipients processed information using Japanese captions more often

than information processing for getting the impressions. Error analyses revealed trends of learners' errors. They highly evaluated the construction of captions and images. Among subitems, scores on Professor Bandura's own narration had the highest evaluation. The test of applying acquired knowledge to their own research, practice, or life situations revealed that social cognitive theory could be helpful to the learners. The author's interview with Professor Bandura was very helpful for understanding the background of the images and the narration, and thereby, to improving Japanese captions. Analyses of the multidimensional evaluation tests clarified the recipients' information processing technique, whereas the interview with Professor Bandura clarified sender's intention. Suggestions for improving Japanese captions and the development of learning and instructional guides include: highlighting key words, explaining key concepts, providing related printed materials, discussing personal experiences and applications of the theory with others.

Keywords: Japanese, learning and instructional guides, social cognitive theory, learning errors, social cognitive theory

Formulation, cognitive-behavioural therapy and restorative justice conferencing in addressing depressive symptoms

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The aims of this research were to appreciate the value of frequently revising case formulation, to see the link between formulation and choice of therapeutic approach, and to explore the possibility of integrating Restorative Justice Conferencing (RJC) along with Cognitive-Behavioural Therapy (CBT) to reduce depressive symptoms, of a client whose husband had repeatedly cheated on her. Case formulation is an evolving process requiring frequent revision before a treatment plan can be devised. Adopting CBT exclusively with individual clients may not be effective in all cases. By being creative, the CBT therapist can explore other therapies which, when combined with CBT, can help resolve this challenging problem. This case illustration explains how RJC was integrated

along with CBT to help a family attain closure from the repeated infidelity of the husband, and move forward. The agreement was worked around the issue of trust. The husband agreed to look his wife and each of his daughters in the eye and tell them “it was over”, and “he would never ever betray their trust again”. Another outcome was that both agreed to undergo Couples’ Therapy, so they could work through their other differences. This was something my client’s husband was, hitherto, quite averse to accepting. His request that his daughters start to call him “dad” again was accepted. A last clause in the agreement stated that at some point during or after Couples’ Therapy, the two of them would renew their marriage vows in the presence of their children. In conclusion, careful formulation will almost always point the therapist in the direction of the most suitable therapeutic approach to be used. RJC can be very effectively used along with CBT for resolving complex clinical cases.

Keywords: *restorative justice conferencing, cognitive behavioural therapy, case formulation, couples therapy, depression*

Friendship motivation and role behavior expectation

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The aim of the present study was to investigate the correlation between friendship motivation and the expectation about the role behaviors. Particularly, the developmental change of individuals was examined by comparing junior high school students and university students. The Friendship Motivation Scale (Okada, 2005) was used, which was developed in the framework of the self-determination theory. Based on the self-determination theory, four subscales were expected; external, internalized, identified, and intrinsic reasons. The Role Behavior Expectation Scale (Shimotomai, 1991) consisted of six subscales; support, proximity, autonomy, amusement, similarity and dynamics. Both scales were scored using a 5-point Likert scale. The participants were asked to imagine a person with whom they kept company and to classify him/her as an intimate friend, friend or acquaintance. They then rated their expectation

about the role behavior for an identified person. The questionnaire survey was completed by 69 junior high school students and 182 university students in Japan. Scores from each subscale of the Friendship Motivation Scale and Role Behavior Expectation Scale were averaged. The results revealed that the mean scores of intrinsic reasons on the Friendship Motivation was highest in both junior high school students and university students, with the mean scores decreasing in the order of identified, internalized and external reasons. The mean scores of external reason were higher in university students than in junior high school students. In contrast, the mean scores of intrinsic and identified reasons were higher for junior high school students than for university students. As for the role behavior expectation, the scores were higher in junior high school students than in university students as a whole. Especially, the tendency was noticeable in proximity and amusement. The expectations for proximity, support, autonomy, and dynamics were high, and the expectation for similarity was low as a whole. Significant correlations were found between friendship motivation and the role behavior expectation.

Keywords: *friendship, role behavior expectations, students, autonomy, proximity*

Gender and innovation: The mediating and moderating effect of psychological capital

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Previous research showed that there were gender differences in innovation (e.g., Mostafa, 2005). This research aims to explore the possible mediating and moderating effects of Psychological Capital (PsyCap) on the relationship between gender and innovation. Study One examined a general employee sample ($N = 339$) on PsyCap and self-reported innovation behavior. Results showed that after controlling for demographic variables such as age, education level, management position and tenure, the higher PsyCap level resulted in more innovation behavior in males than in females. Meanwhile, PsyCap mediated and explained 58.43% of innovation gender differences. Study

Two examined PsyCap and supervisor-rated innovation behavior in employees from four corporations ($N = 861$). Results demonstrated the mediating and moderating effects of PsyCap found in Study One. Overall, the findings showed the new function of PsyCap and helped to develop and cultivate innovation behavior in organizations.

Keywords: *innovation, gender differences, psychological capital, management, employees*

Gender and temperament differences in meaning attribution

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The aim of this study was to investigate gender and temperament-related differences in meaning attribution. Osgood's semantic differential applied to the most neutral and abstract concepts assessed using basic adjectives bipolar scales, could be used as a semi-projective method to study the characteristics of meaning attribution. The analysis of direct estimations of the abstract concepts was combined with a component analysis of semantic spaces (derived from factor analysis of the subjects' estimations). The study was conducted in English for 1180 Canadians, in Russian for 167 Russians and in Chinese for 161 Chinese subjects. The direct estimations showed gender and temperament-related differences in meaning attribution. Males in all three samples attributed more negative estimations to abstract objects than females. People with stronger endurance and tempo in verbal-social activities differed dramatically from other temperament groups. At the same time there were cultural differences in semantic spaces of various gender and temperament groups. Gender and temperament differences in meaning attribution indicate a possible contribution of biological factors in resulting attitudes. The differences between "extraverts" and other temperament groups also show deficits of so-called "lexical approach" in studying personality and individual differences, which rely on factor analysis of descriptors of human behavior.

Keywords: *meaning attribution, temperament, gender differences, lexical approach, personality*

Gender differences in mate selection: The effects of socioeconomic status and physical attractiveness

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The selection of marriage partner is one of the most important decisions in one's life. Two criteria, socioeconomic status and physical attractiveness, are frequently discussed in literature. However, researchers have shown that the weight of these criteria differs between sexes. The aims of this study were to examine whether Asian people select their spouse according to the rules of matching theory and competition theory, and whether this selection outcome reveal similarities between Western and Asian populations and between sexes. A pilot test was used to choose four pictures and then an experiment was carried out to examine our research questions. Participants were recruited from Taiwanese college students. We found that the spouse selection of females and males conforms to Western matching theory only when considering education status. There was a difference between females' and males' mate selection only when earnings status was taken into account. Females tended to select a spouse who had higher earning status than themselves, whereas males tended to select a mate who had similar earnings status to themselves. Finally, we also found support for the different impact of physical attractiveness on males and females. In conclusion, both males and females tended to select spouse based on similar cultural status. In regards to economic status, males preferred a partner who was in the same status while females preferred a partner who was in higher status. Both males and females emphasized economic status over cultural status. In regards to physical attractiveness, both males and females were affected by physical attractiveness but this effect was significantly stronger on males than on females.

Keywords: *matching theory, competition theory, socio-economic effects on mate selection, earning status, physical attractiveness*

Gender specific self-management of technical university teachers

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A contemporary teacher of a technical university must be educator, scientist and organizer simultaneously. Due to the increase of number of female teachers among them during the last few years it is important to study the reasons leading to irrational use of teacher working-time, especially when its gender specific. The aim was to show gender specific differences of teachers' self-management and to create a program of psychological training in self-management skills for postgraduates and young teachers. Two hundred and eighty university teachers (146 male and 134 female) took part in the research. Techniques applied for the development of self-perfecting consist of four stages: (1) activity monitoring and time analysis; (2) inventory of registered "time-eaters"; (3) study of main functions of self-management; and (4) creation of individual technology of economical time usage. Grouping of primary data, alternative and comparative analysis, and graphic interpretation of data were used. Qualitative analysis identified three categories of "time-eaters": subjective (26.9%: 11.2% – male; 15.8% – female); objective outside university (63.8%: 26.3% – male; 37.5% – female), and objective inside university (22.4%: 9.1% – male; 13.3% – female). However, women have a higher level of self-management than men irrespective of pedagogical experience. After training, men decreased number of subjective time-eaters from 11.2% to 7.1%, and women decreased these from 15.8% to 9.2%. Nevertheless, the tendency of women to register a bigger number of "time-eaters" remained and they registered 31% more "time-eaters" than men. The data obtained allow us to assume that males think of rational use of time less thanks to a combination of smaller number of functions. Women who need to combine teaching, scientific work, house affairs etcetera, have time to do all these due to more effective self-organizing only. The further analysis has shown that with development of

pedagogical skill (postgraduates – young teacher – experienced teacher) men have less "time-eaters" and women – bigger number. In conclusion, the research confirmed expediency of psychological training of postgraduates and young teachers in self-management skills for both females and males. However, the problem of effective time use by teachers should be solved in a complex manner, that is, on the one hand by individual inventory of time, and on the other hand, by improvement of university life as a whole.

Keywords: *university staff, gender differences, time management, self-management, time-eater*

Gendered culture at the workplace: How is it related to occupational stress?

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Stress in the workplace is the most commonly reported claim of job-related illness. It has a significant negative impact on the employers and the employees which remains costly to both parties. Previous research showed that women tend to be over-represented in work-related stress claims. Despite an increased number of women entering the workforce, female workers still remain under-represented in management compared to their counterparts. This may stem from organisational management structures that give preference to masculine attributes such as determination, assertiveness and 'toughness' which are more commonly found in men than in women. The study aims to investigate occupational stress from a gendered identity perspective, where the gender-fit between the employee and the workplace is explored. It is hypothesized that incongruence between an individual's gender attributes and the organisation's gender attributes is associated with occupational stress. The moderating effect of negative affect on the relationship between gender-incongruence and occupational stress will also be examined. An anonymous, self-reported questionnaire was developed from the Gender Scale (Palermo, 1992), which measured the gender attributes scores (IV's: feminine/nurturance and masculine/autonomy) for the individual and the organization that produced the incongruence scores; the Positive

and Negative Affect Scale (PANAS; Tellegan, 1984) to collect scores for (IV) negative affect; and the Occupational Stress Inventory – Revised (OSI-R; Osipow, 1998), which measured stress in terms of (DV's:) Role Overload, Vocational Strain and Responsibility. Participants were recruited from masculine (autonomous), feminine (nurturing) and other organisations across a diverse range of industry sectors. One hundred and forty employees (69 males, 70 females), aged between 18 and 65, completed the paper-based or online questionnaire which indicated their individual and their organisations' gender attributes. Occupational stress, coping mechanisms and personality attributes are recorded. The model as a whole explains 16.5% of stress in the form of Role Overload and 36.3% of stress in the form of Vocational Strain after block 5 variables have been included. Gender Incongruence is found to be associated with occupational stress for nurturance incongruence and not for autonomy incongruence. Results do not support that negative affect moderates on relationship between gender incongruence and occupational stress. It is hoped that the findings will encourage more research that incorporates gender identity in the areas of occupational stress. Otherwise, researchers may miss an opportunity to explore the construct of occupational stress from a gendered, systematic perspective within an organization and its culture, which in turn, could aid both employers and employees to better understanding and managing this occupational health hazard.

Keywords: workplace stress, job-related illness, gender attributes, coping strategies, organizational management

Generalised self-efficacy in relation to the life transitions of adult learners in a university setting: Towards a narrative constructivist model of self-regulation

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This paper demonstrates a model of self-regulation based on a qualitative research project with adult learners undertaking an undergraduate degree. The narrative about the participant's life transitions, co-constructed with the researcher, yielded data about their generalised self-efficacy and resulted in a unique

self-efficacy narrative for each participant. A model of self-regulation is proposed with potential applications for coaching, counselling and psychotherapy. A narrative method was employed to construct narratives about an individual's self-efficacy in relation to their experience of learning and life transitions. The method involved a cyclical and iterative process using qualitative interviews to collect life history data from participants. In addition, research participants completed reflective homework tasks, and this data was included in the participant's narratives. A highly collaborative method entailed narratives being co-constructed by researcher and research participants as the participants were guided in reflecting on their experience in relation to learning and life transitions; the reflection focused on behaviour, cognitions and emotions that constitute a sense of self-efficacy. The analytic process used was narrative analysis, in which life is viewed as constructed and experienced through the telling and retelling of stories and hence the analysis is the creation of a coherent and resonant story. The method of constructing self-efficacy narratives was applied to a sample of mature aged students starting an undergraduate degree. The research outcomes confirmed a three-factor model of self-efficacy, comprising three inter-related stages: initiating action, applying effort, and persistence in overcoming difficulties. Evaluation of the research process by participants suggested that they had gained an enhanced understanding of self-efficacy from their participation in the research process, and would be able to apply this understanding to their studies and other endeavours in the future. A model of self-regulation is proposed as a means for coaches, counsellors and psychotherapists working from a narrative constructivist perspective to assist clients facing life transitions by helping them generate self-efficacious cognitions, emotions and behaviour.

Keywords: self-efficacy, adult learners, narrative constructivist model, self-regulation, narrative analysis

Government corruption perception, political trust and "hedonic balance" in Argentina and Spain: A transcultural study

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The aim of the study was to analyze and compare the government corruption perception and political trust in Argentina and Spain and to study the relations between government corruption perception, political trust and "hedonic balance". The study sample comprised 100 households (51 from Argentina and 49 from Spain) and participants completed the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1984) and a scale created ad-hoc to study government corruption perception, and political trust. The current study had three hypotheses. Specifically, it was hypothesised that: 1) there is a strong and negative relation between government corruption perception and political trust; 2) there is a positive relation between hedonic balance and political trust and negative with government corruption perception; and 3) there are significant differences in the perception of the country between Argentines and Spanish people. Results showed that "hedonic balance" has a positive and significant relation with "political trust". There was also a positive and significant relation between the economic perception of the country and "political trust". On the other hand, there seems to be a negative correlation of the economic perception of the country and "government corruption perception". Finally there was a strong, significant and negative relation between "government corruption perception" and "political trust", as we had considered previously. If we consider the significant differences between the two countries, on balance, Spanish people have a more positive perception of the economic situation, a bigger trust in government, and a perception of less corruption in the government than Argentines. There are other demographic variables that may have an effect.

Keywords: *government corruption perception, political trust, hedonic balance*

**Group attitudes and self-identity:
Refugee attitudes and their attitudes
towards their education system**

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The aim of this research study was to examine refugee families and how their group norms and attitudes can relate to their children's educational performance. Several teachers and educators initially feel that the English language barrier is one of the key challenges that prevent refugees from learning. Yet, several educators are finding that it is not so much the language barrier, but the refugee families' different attitudes towards education and especially, the refugee parents' role in the child's education. Many refugee parents feel that they should have no role in their child's educational system because of their culture. The goal of this correlational study was to analyze the incongruence between the refugee values of the education system and the education system of their new culture. Furthermore, the goal is to understand how intra-group and social psychological dynamics of the refugee families will affect or hinder this attitude change. This study will also help understand how educators can address this and make changes to improve the refugees' performance in school. Five schools in Wisconsin who have refugee placements were surveyed determining their knowledge of the refugee students' culture and their attitudes towards school. Twenty six teachers were surveyed. Through a translator, 56 refugee families, who were in the United States (Waukesha County) for at least a year but not over a year and a half were also surveyed about their attitudes towards school. Twenty-four females and 32 males were interviewed with 25 refugee participants from ages 10-18 and 31 over 18. These refugee families were then asked a series of questions about their level of disagreement with newly arrived refugee families who they have had contact with, questions determining cultural identify and comfort level with newly arrived refugee families as it relates to education. Finally, report cards and attendance at parent-teacher conferences was also examined. This study indicated a $r = .81$ correlation that beliefs that low parent involvement of school, high discord within the refugee community as it relates to cultural assimilation and incongruence between teachers attitudes of parent involvement and refugee involvement lead to academic performance

issues. This study indicated that there was a strong positive correlation between the refugee attitude's stating that they feel that education is the teacher's job, not the parents, the wider the discrepancy between the educators and families and the discord with other members of the refugee community and the refugee families' parental involvement and academic performance. This study indicated that educators can benefit and social service placement agencies can benefit from understanding the attitudes of refugee families (that teachers are in authority and that parents should not have any involvement), how this incongruence with the teachers and affects these student's self-self-identity and self-esteem and this affects academic performance. When refugees arrive, sponsoring organizations can learn from this research and communicate and educate incoming refugee families on the culture of the educational system.

Keywords: intergenerational conflict, conformity, cognitive dissonance, attitudes, social behaviour

Group counseling for domestic violence offenders

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The study was conducted to evaluate group counseling for 12 domestic violence offenders in Changhwa County, Taiwan, to create a model for future group counseling for this group of offenders. These participants were mandated by the parole office to join this program. The skills of Solution-Focused Brief Therapy (SFBT) were applied, together with Art Therapy for warm-up. Three measurements were used to evaluate the participants' behaviors in order to understand their changes, if any. An objective observation report was also used for evaluation. The results showed that these participants had certain biases toward females, especially their wives. Most of them felt that their wives should take responsibility for making them angry and violent. The study also revealed that most of them were part-time workers or even jobless, and their wives were from other countries. More details will be discussed. Although group counseling for domestic violence offenders is mandatory, the results indicate the program was not effective

due to limited time and budget. A SFBT model could be considered for this special group of offenders.

Keywords: domestic violence, solution-focused brief therapy, mandated, men, group therapy

Have you met the Black Guy? Acculturative dynamics with overseas work

JOHNSON II, B. (deep1914)

Despite the tremendous influence of the Multicultural Counselling Competencies (MCCs) (Sue et al., 1998) on the field of psychology, Leung (2003) pointed out that the multicultural movement within psychology continues to lack a sufficient focus on globalization. Working and living overseas has been offered as one mechanism for internationalizing psychology and enhancing ones multicultural competence (e.g. Wedding, 2007). Specifically, this approach can assist academic educators with: (a) equipping the field to meet the needs of an increasingly diverse population, (b) exposing the field to diverse worldviews and perspectives that can inform interventions, (c) equipping psychologists to effectively address emerging social, cultural political and environmental problems around the globe that impact individuals and groups; and (d) increasing psychologists' participation in the global research community (Kitayama & Markus, 1995; Leong & Ponterotto, 2003; Marcella, 1998, 2007). Despite these and other advantages, a number of challenges have been identified for those psychologists working internationally, including: (a) lack of cultural awareness, understanding and sensitivity on the part of the host culture (e.g., Bochner, 1999; Draguns, 2001; Leong & Santiago-Rivera, 1999), (b) difficulty navigating issues related to acculturation and ethnic identity on part of the international professional. This is a complex matter and it is imperative that more attention is devoted to addressing the experiences of professional psychologists working internationally. This paper will focus upon the personal and professional impact of a Black-American Clinical Psychologist working at a University within regional Australia. Specifically, I will examine how this experience offered an

opportunity for increasing multicultural counseling competency (i.e., increasing self-awareness, understanding different worldviews, and developing culturally appropriate intervention skills) through allowing opportunities for: (a) experiencing cultural/human differences, (b) developing scholastic collaborations and exchanging professional ideas, and (c) challenging western isolationistic assumptions.

Keywords: *multicultural counselling competency, academic educators, cultural awareness, ethnic identity, acculturation*

Having a sense of efficacy: Considering adolescent and adult perceptions of self and self-in-community in relation to meeting personal and communal challenges

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This review paper reports on a series of five studies that have sought to understand differences and commonalities regarding the constructs of self efficacy and communal mastery in relation to personal and community problem solving. Adult studies include university students' management of stress, rural residents' management of land use issues and volunteering behaviour, and urban residents' management of water resources. Adolescent studies of mental health and community engagement include general and clinical samples. Once shared variance for measures of generalised self efficacy (Schwarzer & Jerusalem, 1995) and communal mastery (Hobfoll, Schroder, Wells & Malek, 2002) was removed, the relative significance of the two constructs tended to differ in relation to predicting aspects of personal problem solving (coping and well-being) and community problem solving (volunteering and engagement). For example, while adults' reported self efficacy was a better predictor of managing worries, communal mastery was more predictive of managing actual stressful events. Adolescents' reports of communal mastery were a better predictor of mental health indicators and coping than their reports of self efficacy. In regard to environmental issues, self efficacy contributed

more to the prediction of pro-environmental behaviour than communal efficacy. Findings are discussed in terms of advancing conceptual understanding of the two constructs and the importance of promoting the development of communal as well as self efficacy in caring for the good of the one and the good of the many.

Keywords: *self efficacy, pro-environmental behaviour, communal problem-solving, communal mastery, community engagement*

Healing and recovery amongst survivors of torture and trauma

KAPLAN, I.

This paper will present an overview of pre-arrival, settlement experiences and recovery processes as they apply to people coming to Australia from Burma, Iraq and Afghanistan. An early intervention program and a longer-term counselling and advocacy program at the Victorian Foundation for Survivors of Torture will be described in order to highlight the process of understanding needs and how both specialist and community-based strategies, are shaped accordingly. Healing occurs on many levels and this paper will also explore the language and concepts required to understand the changes which occur and the barriers to change when promoting and assisting in the remaking of lives which have been subjected to the extremes of human rights violations. A human rights framework is essential to understanding the distinctive risk and protective factors to be considered when working with newly-arrived survivors of torture and trauma. Pre-arrival experiences characterised by extensive exposure to violence and loss and forced displacement have their roots in systematic human rights violations. The struggle over being selected for resettlement is a rarely acknowledged additional experience beyond the control of survivors. Once in Australia, a host of factors influence whether new lives do indeed begin. They range from the broadest contextual factors, such as international security concerns and ongoing zones of war and conflict, to the local context, especially the quality of service systems and the capacity of communities to respond to survivors. Many settlement experiences can inadvertently exacerbate pre-arrival experiences of systematic

persecution when they reinforce helplessness, lack of belonging, injustices and lack of respect. Recovery requires restoring a sense of control, connections, meaning, justice, and dignity as well as addressing difficulties which may manifest as psychological symptoms.

Keywords: survivors of torture and trauma, early intervention, healing, human rights, Australia

Health and psychological measures of inpatients with schizophrenia

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Individuals with a diagnosis of schizophrenia have greater health problems than the general population. Amongst this segment of the population there is little research on weight and health control from a psychological perspective. This study examined a program from a Self-Regulation perspective. A quasi-experimental and case study design was employed to test 14 inpatients in a Dual Diagnosis (mental illness and substance abuse) rehabilitation program. A health psycho-education group combined with an exercise session (or other activity choice) made up the components of the program under study. Self-report questionnaires were administered at four periods: baseline, pre-treatment, post-treatment and at one month follow-up over a five month period. Physiological measures were taken weekly. Three representative case studies are included. Self-efficacy increased and there was a non-statistical trend towards greater activity. Although other psychological measures were not significant, there was a positive trend. As self-efficacy is a prelude to greater self-regulation, it could be suggested that this program was long enough to psychologically prime the participants but not to the degree that self-regulation would be changed. A longer time frame for program efficacy is required with this population.

Keywords: self-efficacy, schizophrenia, self-regulation, dual diagnosis

Health behavioral model among school aged children in private schools in Bangkok, Thailand

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The aim of this study was to develop the causal model of health behaviors among school aged children. The causal factors consisted of sex, health behavior knowledge, student's care by parent, self esteem, perceived self efficacy, self regulation, and self care. The consequence was health behaviors which were included factors: nutrition, exercise, and leisure time. The samples were 297 school age children (Grades 4 to 6) among two private schools in Bangkok. The data were collected by seven questionnaires which had the range of internal consistency reliability coefficients from 0.70 to 0.90 and construct validity tested by confirmatory factor analysis method. The data were analyzed using structural equation modeling method (SEM) from LISREL software. The developed model were consistent with the empirical data ($p = 0.63$) revealed that the six causal variables accounted for 42% of the variance of students' health behavior. The details of the causal relationship of variables were as follows: (1) The students' health behaviors were most directly affected by students' health care by parent ($\beta = 0.58$), followed by perceived self efficacy ($\beta = 0.23$), self care ($\beta = 0.10$), sex ($\beta = 0.09$), self regulation ($\beta = 0.04$), and self esteem ($\beta = 0.03$) respectively. (2) The students' health care by parents directly affected perceived self efficacy ($\beta = 0.39$), self care ($\beta = 0.18$), and self regulation ($\beta = 0.14$). Students' health care by parents was the important antecedent of students' health behaviors and the enhancing factor of students' attributes on the social cognitive theory. Thus, parents should be devoted to looking after their children's nutrition, exercise, and leisure time.

Keywords: health behaviours, child health, parental care, social cognitive theory

Helping behavior and contextual variables

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This quasi-experimental study investigates the influence of situational variables on helping

behavior. A 2 x 2 x 2 x 2 factorial design was employed in which manipulated scenarios of helping situations were depicted to form the four factors, containing two levels each: 1) the reason why the needy person asks for help (emergency x non-emergency), 2) gender of the needy person (female x male), 3) the kind of situation (public x private), and 4) the degree of proximity between the needy person and the person who helps (close person x unknown person). Participants were asked to indicate their intention to help in each situation. A total of 408 undergraduate students from public and private Brazilian universities took part in the study. Most of them were female (60.3%), single (83.9%) and with a medium self-reported economic status (60.1%), and with ages ranging from 17 and 58 years ($M = 22$; $SD = 6.39$). ANCOVAs were conducted to examine the effects of the situational variables on helping behavior, with social desirability entered as a covariate. Main effects for three of the four situational variables were observed: the type of the situation, the reason for asking for help, and the relationship between who helps and who asks for it ($F > 5.00$, $p < .001$ for all). There was no main effect for the gender of the needy person [$F(1,337) = 0.178$, $p = 0.643$], but significant interactions were observed between gender of the needy person and both type of situation and relationship between the needy person and the person who helps. Overall, the results indicate that participants would be more likely to help when the situation (1) is an emergency, (2) is a public situation, and (3) involves a close person. Also, the gender of the needy person does not seem to be important. These empirical findings support previous studies showing that helping behavior depends on contextual variables. The theoretical and practical implications of these findings are discussed.

Keywords: helping behaviour, intention to help, help-seeking

Hope and curiosity: Two significant strengths on mental health - A study among Chinese college students

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Peterson & Seligman (2004) introduced the 24 character strengths in the literature on positive psychology. Hope, curiosity, gratitude, love and vitality were proposed to be the five "key strengths" due to their strongest relationships with well-being (Shimai, Otake, Park, Peterson & Seligman, 2006). However, rare evidence revealed the comparative importance among the five key strengths on predicting well-being as well as depression. Therefore, we designed two sequential studies to answer this question. First, a cross-sectional study was conducted among 420 college students (aged 16-23 years) in China to compare the relative importance of these five key strengths on mental health. Participants completed corresponding items of the Values in Action Inventory (VIA; Peterson & Seligman, 2004) to measure their key strengths. Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999) and Center for Epidemiologic Studies Depression Scale (CESD; Radloff, 1977) were used to measure happiness and depression levels respectively. A second study was conducted after obtaining the results of study 1. Four hundred and twenty three student participants (aged 16-21 years) were recruited from a single college in Beijing. Their strengths of hope and curiosity were assessed by Adult Dispositional Hope Scale (ADHS; Snyder & Harris, 1991) and Curiosity Exploration Inventory (CEI; Kashdan, 2004), respectively. Their happiness and depression levels were assessed using the same inventories as in Study 1. Correlation analysis with Study 1 data indicated that all of the key strengths were positively correlated with happiness ($r=.31\sim.59$) and negatively correlated with depression ($r=-.27\sim-.48$). In particular, multiple regression analysis showed that hope ($\beta=-.31$, $p<.01$) and curiosity ($\beta=.42$, $p<.01$) were the strongest predictors of depression and happiness, respectively. To confirm these results, we examined the relationships between hope, curiosity and happiness, as well as depression, with Study 2 data, using a structural equation modeling (SEM) method. The results will be reported at the Congress. Although the five key strengths all related to mental health, hope and curiosity showed outstanding roles in predicting depression and happiness, respectively. Understanding these two strengths more will benefit human fulfillment.

Keywords: *mental health, five key strengths, depression, well-being, Chinese students*

How corporate social responsibility practices, and human resource practices, interact to influence job-seekers: An empirical study

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Whilst corporate social responsibility (CSR) appears to have benefits for employee outcomes (e.g., Brammer, Millington & Rayton, 2007; Pettijohn, Pettijohn & Taylor, 2008), research suggests that it explains little unique variance in employee engagement beyond traditional human resource (HR) practices. One explanation for this finding is that employees view HR practices as a form of social responsibility. An experiment was designed to examine the extent to which HR and CSR practices influenced job-seeker ratings of organisation social responsibility and organisation attractiveness. Participants were asked to play the role of job seekers. They were given a description of an organisation, in terms of its attractiveness and social responsibility, and were asked to rate the organisation. This experimental approach allowed for manipulation of information about hypothetical organisations, to give a clearer indication of how such information is perceived. A 2x2 factorial design was used such that descriptions manipulated organisational performance in terms of HR practices (high/low) and corporate social responsibility practices (high/low). The descriptions were counterbalanced, resulting in eight final descriptions, which were randomly allocated among the 128 participants. A two-way ANOVA was used to analyse the hypotheses. Results suggest that whilst both high HR, and high CSR, practices significantly increase ratings of organisation attractiveness, HR practices increase organisation attractiveness to a greater extent than do CSR practices. Conversely, whilst both high HR and high CSR practices significantly increase ratings of social responsibility, CSR practices increase social responsibility ratings to a greater extent than do HR practices. No interaction was found between CSR practices and HR practices in their impact on either

outcome. These results support the suggestion that job-seekers view HR practices as one of the ways in which an employer can be socially responsible. The lack of interaction between CSR and HR practices questions the suggestion that CSR may have little impact on employee outcomes beyond the impact of HR practices. Finally, these results suggest that positively engaging in both HR practices and CSR practices will have benefits for organisations in terms of increased attractiveness.

Keywords: *corporate responsibility, social responsibility, human resources, job-seekers, employee outcomes*

How does emotional valence affects time perception and situational awareness

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The aim of the study was to examine how positive and negative emotional arousal affects the perception of time and situation awareness (SA). Several studies have suggested that different emotional states affect the perception of time differently. In the present study, a different method of time estimation was tested with the aim of circumventing some of the problems faced by more traditional time estimation methods. Three different sets of 20 emotional slides rated for valence and arousal (International Affective Picture System) were shown to three groups of participants for six seconds. Each set of slides was designed to evoke one of positive the following emotional reactions: positive high arousal (PHA), negative high arousal (NHA), or neutral low arousal (NLA). The State-Trait Anxiety Inventory (STAI) was administered in order to control for baseline levels of arousal. The emotional slides were sandwiched between two emotionally neutral slides, each having a duration of either three or nine seconds, counterbalanced across 20 trials. Analysis of variance revealed a statistically significant difference ($p < 0.05$) in the perceived duration of the slides for the three emotional groups (PHA, NHA & NLA), $F(2, 38) = 7.7$, $p = 0.02$. Eta squared was 0.29. Post-hoc comparisons using Tukey's HSD indicated that the mean score for the NHA group ($M = 11.76$, $SD = 2.69$) was significantly different from the PHA group ($M = 8.57$, $SD = 1.45$). The NLA group

($M = 10.20$, $SD = 2.39$) did not differ significantly from either the negative or positive Group. Crucially, measures of situation awareness showed statistically significant differences between the positive and negative groups but no significant difference from the neutral group. These results are interpreted within a model of action tendency, in which negative and positive emotional valences control different motivational and attentional mechanisms, with negative valences controlling Behavioral Inhibition Systems (BAS), and positive valences affecting BAS.

Keywords: *perceptions, situation awareness, emotional states, arousal*

How does psychological empowerment influence employees' turnover intention: The mediating effect of organizational commitment and the moderating effect of work involvement in the mediated model

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Due to the influence on the organization's performance, employee turnover and turnover intention have received considerable attention worldwide. This study examined the relationship between psychological empowerment and employee turnover intention, as well as the mediating role of organizational commitment and moderating role of work involvement in the mediated model. In one sample, 481 employees from a manufacturing company located in southeastern China rated their psychological empowerment, organizational commitment, work involvement and turnover intention. Results showed that psychological empowerment was negatively related with turnover intention through the mediated effect of organizational commitment. Work involvement moderated the mediated model, that is, psychological empowerment was positively related with organizational commitment, especially for the employees with high work involvement, and organizational commitment was negatively related with turnover intention, especially for the employees with high work involvement. Based on the above results, psychological empowerment was found

to be a factor on the employees' turnover intention. Whereas organizational commitment played a mediating role in the relationship, and work involvement played a moderating role in the mediated model. Thus, the results underscore the importance of accounting for work involvement when examining the relationships between empowerment, organizational commitment, and turnover intention.

Keywords: *empowerment, employee turnover, turnover intention, organisational commitment, work involvement*

How does self-consistency influence organizational variables: The moderating effect of relational interdependence

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Self-consistency describes individuals' tendency to be consistent across different social roles. Previous research demonstrates that high self-consistency is associated with less depression and more subjective wellbeing. But the effect of self-consistency on organizational variables is ignored. The present study focuses on this question. Moreover, cultural psychologists find that relational interdependence moderates the relationship between self-consistency and wellbeing such that self-consistency is not important for highly interdependent individuals. Thus, we also examine the moderating effect of interdependence. Finally, we separate workplace-specific self-consistency and general consistency so as to investigate their different effects on organizational variables. Two hundred and twenty-four employees from 28 different companies participated voluntarily. They were asked to finish the questionnaire independently and seriously, and return the questionnaire the second day. The valid response rate was 91.25%. Measurements included self-consistency (i.e. 104 employees finished the workplace self-consistency measurement while 115 employees finished the general self-consistency measurement), life satisfaction, job satisfaction, organizational commitment (i.e. affective commitment, normative commitment, and continuance commitment), and relational

interdependence. General self-consistency was found to be positively related with individuals' life satisfaction, but negatively associated with the continuance commitment. Workplace-self-consistency was positively related with life satisfaction, job satisfaction, and normative commitment, but negatively associated with the continuance commitment. Furthermore, interdependence moderated the relationship between general self-consistency and organizational variables. For those with low interdependence, higher general self-consistency predicted higher job satisfaction, affective commitment, and normative commitment. For those with high interdependence, higher general self-consistency predicted lower continuance commitment. Self-consistency is important in workplace. Compared with general self-consistency, workplace self-consistency better predicts individuals' perception in organizations. Interdependence moderates the relationship between general self-consistency and organizational variables.

Keywords: self-consistency, relational interdependence, job satisfaction, organisational commitment, subjective well-being

How emotional valence colors our attention

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Emotional stimuli have a priority to be processed relative to neutral stimuli. However, it is still unclear whether different emotions have similar or distinct influences on attention. To answer the question mentioned above, we conducted three experiments, which used three emotion valences: positive, negative and neutral. Pictures of money, a snake, a lamp and Character X were used as stimuli in Experiment One. In Experiment Two, schematic emotional faces (angry, smiling and neutral face) were used as experimental stimuli to control the stimuli complexity. In Experiment Three, the stimuli were three line drawing pictures selected from the Chinese Version of Abbreviated PAD Emotion Scales, corresponding respectively to the emotions of anger, joy and neutral. We

employed the paradigm of inhibition of return (IOR), an effect on spatial attention where people are slow to react to stimuli which appear at recently attended locations (Posner & Cohen, 1984) which used exogenous cues and included 20% catch trials. Fifty-three university students participated in the experiments. We found that participants needed more time to process negative picture (Experiments 1, 2 and 3), and the effect of IOR could happen at the Stimulus Onset Asynchrony (SOA) in as short a time as 50 milliseconds (Experiment 1). Meanwhile, the data demonstrated that IOR had happened at an SOA of 50 milliseconds only when the schematic face was angry, and the Reaction Time (RT) for angry schematic face was significantly longer than RT of the other two faces (Exp2). In all three experiments, we consistently found that there was a U-shaped relationship between RT and SOA, irrespective of the cue validity and emotion valence. These results showed that different emotional valences have distinct influences on attention and also indicated that emotions of happy or neutral could be processed more rapidly than the emotion of anger.

Keywords: emotional stimuli, stimulus onset asynchrony, inhibition of return, schematic emotional faces

How fast? The effect of post event information and perceived involvement on memory for the details of motor vehicle accidents

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Eyewitnesses are often called upon to provide information to police and insurance investigations into the causes of motor vehicle accidents. One of the most critical details they may be required to recall is the speed of the vehicle(s) immediately prior to the accident. Research has shown that information presented to an eyewitness after the event (post-event information) is likely to be incorporated into their memory of the event, regardless of accuracy. In real motor vehicle accidents one powerful source of post-event information may be the sight of the accident itself. That is, the knowledge that the vehicle crashed may affect

the witness's memory of the details of the event, including the vehicle's speed prior to the crash. Furthermore, there is reason to predict that participants who are more actively involved in the event are less susceptible to the effect of post-event information than those who see themselves as passive observers. This study was designed to investigate these issues. Seventy-eight participants sat in a driving simulator with a confederate and watched the car drive around a track. For half the participants the drive ended with an unavoidable collision with another car. Half the participants believed that the confederate was driving the car (high involvement) while half knew the simulation was pre-recorded (low involvement). Participants were tested for their memory of the details of the event including the speed of the vehicle immediately prior to the end of the simulation. For participants who believed their partner was driving the car, seeing the car crash resulted in a significantly higher estimate of the vehicle's speed compared to those who did not see a crash (a difference of about ten kilometers per hour). However, unexpectedly, this difference was reduced and marginally non-significant for participants who knew they were watching a pre-recorded drive. Memories for other details of the event were also assessed. Our results demonstrate that eyewitness accounts of the circumstances of a motor vehicle accident can be inaccurate and are likely to be influenced by extraneous sources of information. In particular this study presents the first clear evidence that an eyewitness's estimate of the speed of a vehicle is likely to be inflated if they saw the vehicle crash. This finding has important practical implications for police and insurance investigations of the cause of motor vehicle accidents. Further, the demonstration that level of perceived involvement influences susceptibility to post-event information has important implications for eyewitness memory research.

Keywords: eyewitness memory, perceived involvement, post-event information

How workplace hazards and training influence learning and performance

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Based on hypotheses derived from social and experiential learning theories, this investigation meta-analytically examined how different types of hazardous events/exposures, when considered in safety training programs that vary in terms of social interaction, relate to enhanced learning and behavioral outcomes. A central premise of this study is that one's understanding of risk associated with different types of hazardous events/exposures is socially developed, which in turn shapes one's motivation to learn and transfer acquired knowledge to the job. For this meta-analysis, a total of 118 primary studies that had 151 independent samples, and 172 safety training effects based on a total sample size of 28,753, were included. An important finding from this study was that hazard event/exposure severity interacted with training engagement to, on average, produce more pronounced learning and performance only when hazard event/exposure severity was high and training was highly engaging. For knowledge acquisition, the mean standardized effect size (d-statistic) difference between the lesser (mean effect = .75) and highly engaging (mean effect = 1.67) forms of training under the high hazard severity condition was .92 ($p < .05$). Likewise, the mean difference between the lesser and highly engaging forms of training for safety performance was .64 (with the mean effects for the lesser and highly engaging forms of training being .40 and 1.04, respectively) and statistically significant ($p < .05$) under the high hazard severity condition. Under the low hazard severity condition, as expected, the mean training effects for the lesser and highly engaging forms of training were comparable in magnitude (with mean differences being statistically non-significant) for both knowledge acquisition and safety performance. The psychological mechanism offered for the expected interaction effects was referred to as the "dread factor," the realization of the dangers associated with ominous hazards and the experienced feelings that one has about the possibility of such events/exposures. This affective response was expected to promote the motivation to learn about and avoid ominous hazards. Implications of these findings for theory

testing in regard to the dread factor and for incorporating information on objective risk into safety training will be discussed.

Keywords: *hazardous environments, safety, dread exposure, hazardous environments, job knowledge*

Identification and the embedding of strategic change

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Literature has illustrated how successful strategic change requires identification to fundamentally alter, with transformation occurring over three stages. Our research aims to elaborate on this process. Using Fiol's (2002) model we investigate whether, during a period of strategic change, individuals and organisations move alike through a series of predictable phases. Secondly, we investigate the effectiveness of managerial strategies employed at each phase. Focusing on the role of individual managers, we examine whether managerial levels of organisational identification relate to sensemaking. Finally, we provide new insights into levels of identification required for achieving strategic change, and discuss sensemaking techniques leaders can utilise. This paper presents a study of five health and social care organisations in England as they attempt to embed a strategic change (moving services to a remote care model). The increased provision of remote care is a key policy in the UK and elsewhere. Our longitudinal, ethnographic case studies document both successful and aborted attempts by top managers to shift the provision of healthcare services. We found that language and shared behaviour enable and guide organisational identity transformation but neither is wholly sufficient to engender the level of change required. Symbolic and rhetorical strategies are most useful in the first phases of change. For newly learned understandings to then gain purchase a wide range of shared tasks and role based behaviours must be consistently employed, that allow for no backward slippage. In understanding variations in change across our five sites, we found a strong link between managerial identification at the start of the study and subsequent attempts at sensemaking, with high levels of organisational identification

problematic. The relationship suggests a strong connection between organisational action and individual motivations; that powerful individuals direct organisational actions in ways that are coherent with protecting their identity. When attempting to strategically change organisational identity leaders need to employ a range of different sensemaking strategies that allow identity to be negotiated at each stage of transformation. This process may be best facilitated with the help of outside agents.

Keywords: *strategic change, identity, organisational identity*

Illness representations as predictors of quality of life in hemodialysis patients

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Health-related quality of life in hemodialysis (HD) patients is a significant predictor of mortality and hospitalisation. This study examined illness representations as predictors of quality of life in HD patients. Two hundred HD patients completed the Kidney Disease Quality of Life-36TM (KDQOL-36 TM; mean age 49.15±15.42). Illness representations were assessed using the Brief Illness Perception Scale. A canonical correlation analysis was conducted using eight illness perception variables as predictors of the five of quality of life variables to evaluate the multivariate relationship between the two variable sets. The analysis yielded five functions ($R^2c = 0/55, 0/10, 0/08, 0/028, 0/018$ respectively). The full model was statistically significant ($\lambda = 0/344, F = 5/65, p < 0/001$) and explained 65% of the variance shared between the variable sets. Given the R^2c for each function, only the first two functions were considered noteworthy (55% and 10%, respectively). The dimension reduction analysis indicated the full model and functions 2 to 5 were statistically significant ($F = 5/65, p < 0/001, F = 1/74, p < 0/01$, respectively). Structure coefficients for function 1 indicated that relevant criterion variables in dependent linear combination were primarily; mental component, symptoms, effects of Kidney Disease (KD) on daily life, burdens of KD and physical

component; with consequences, personal control and treatment control, identity, concern and emotional response making independent synthetic criterion variables. Moving to function 2, structure coefficients suggest that the dependent variables of most relevance were mental component, symptoms, identity, understanding and emotional response that have most shared variance in independent linear combination. The results suggest that illness representations predict quality of life in end stage renal disease patients treated by HD, and could have important implications for treatment of these patients.

Keywords: *kidney disease, hemodialysis, quality of life, chronic disease, illness representations*

Imagined contact with a stigmatized outgroup: Impact on social distance and intergroup anxiety towards people with a mental illness

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Imagining positive contact with an outgroup member has been shown to reduce prejudice towards that group. The present study assessed the effectiveness of imagined intergroup contact as a method for reducing stigma towards a highly stigmatized outgroup, namely people with a mental illness. One hundred and seven undergraduate psychology students were randomly assigned to either imagine a positive interaction with someone labeled with a mental illness (schizophrenia or depression) or to imagine contact with someone with no explicit label. Participants then completed measures of social distance, intergroup anxiety and prior contact with the outgroup. Results showed a significant positive effect for imagined intergroup contact on both desired social distance and intergroup anxiety; however this effect was not dependent on the type of mental illness label (schizophrenia or depression). Prior contact with the outgroup was shown to moderate the positive effect of imagined intergroup contact on social distance, with the effect being stronger for those who reported previous positive contact with persons with a mental illness. Contrary to previous research, intergroup anxiety did not mediate the

relationship between imagined intergroup contact and social distance. This study demonstrated that imagining intergroup contact can lead to a reduction in prejudice against a highly stigmatized group, such as persons with a mental illness. Such results have implications for reducing stigma towards outgroups where opportunities for regular contact may be rare and for enhancing the positive effects of 'real' contact when it occurs.

Keywords: *mental illness, stigma, anxiety, outgroup, imagined contact*

Immigrant wives' parental experiences in Korea

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Multicultural families are highly increasing in Korea in recent years. Korean multicultural families are specific because they were mostly composed of Korean husbands and immigrant wives who came from Southeast Asia. This study examined immigrant wives' parental experiences. Subjects were 17 immigrant wives who settled in Gyeonggi-do province. Data were collected by in-depth interview individually. Results indicated that (1) immigrant wives have experienced difficulties in communication, household economy, and childcare. (2) They were interested in children's academic achievement and social-emotional development. (3) They stressed education and basic care for the parenting role. (4) They demanded teaching academic skills for their children, parent education or counseling, and information about child development from childcare centers.

Keywords: *multicultural families, Korea, parental experiences*

Impact of implicit attitudes toward smoking on selective exposure to prevention information

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Many studies deal with the impact of prevention campaigns. Whatever the method used, most of them postulate that people take the campaign into consideration as soon as they are exposed to it. Yet, according to Festinger (1957), people expose themselves to attitude-consistent information and tend to avoid attitude-inconsistent information that could arouse dissonance. The goal of this study was to enhance such effects with tobacco campaigns. We intend to show that exposure to information dealing with tobacco effects depends on attitudes and behavior toward smoking. Forty-four smokers, 80 non-smokers and 58 quit-smokers were proposed to participate in a survey that would supposedly determine the content of a future information session dealing with the harmful effects of tobacco, alcohol, junk food, drugs etc. People were asked what kind of topic would interest them most. Then, their attitudes, behavior and dependency toward smoking were evaluated. To evaluate attitudes toward smoking, we chose to use both an explicit (Attitude Toward Smoking Scale, ATS; Etter et al., 2000), and an implicit measure (the Single Category of Implicit Association Test, SCIAT ; Karpinsky and Steinman, 2006). Based on response latencies, this kind of measures allows the access to unconscious attitudes and thus avoids social desirability bias (for stigmatized objects). Derived from the Implicit Association Test (IAT; Greenwald, McGhee and Schwartz, 1998), the SCIAT allows us to measure implicit attitudes toward a single concept. Finally, smokers and quit-smokers filled in two questionnaires measuring respective stages of change in the process of smoking cessation (Prochaska and DiClemente, 1983) and nicotine dependency (Fagerström Tolerance Nicotine Dependency, FTND; Fagerström, 1991). The main results are consistent with the theory of selective exposure: the more the implicit attitude is negative, the more they are willing to have a training dealing with tobacco. Measures of dependency, explicit attitude or stage of change were not predictive of selective exposure. The discussion will focus on the

consequences of selective exposure on prevention, on ways to reduce its effects and the primacy of implicit measures of attitude toward tobacco to measure the probability of smoking cessation.

Keywords: *smoking, attitudes, nicotine, attitude toward smoking scale, selective exposure*

Impact of inattention provoked by sadness on older drivers' behavior

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In regards to attentional defects in driving situations, inattention is probably one of the less studied. Inattention refers to an endogenous long lasting orientation of the attentional focus on thoughts to the detriment of the driving activity. The present study was interested in the impact of inattention provoked by induced sadness on older drivers' behavior. To evaluate the hypothesis of a defect of attentional focus linked to inattention, we were interested in the impact of a negative emotional state on the three components of spatial attention measured with the Attention Network Test (ANT; Fan, et al., 2002). Fifty-nine older drivers (mean age of 65) were divided into four groups: (a) controls which were neutrally induced and then performed the ANT, (b) sadness-induced subjects which had to imagine eight dramatic described situations with sad music in background, and then performed the ANT, (c) ruminative subjects which were firstly neutrally induced and then invited to hear sad music and ruminate sad thoughts while performing the ANT, and (d) sadness-induced and ruminative subjects, which firstly received the same induction as (b) and then, the same ruminative procedure as (c). Analyses on the Brief Mood Introspection Scale (BMIS; Mayer & Gascke, 1988) showed a significant increase in sadness score following the sad induction for the (b) and (c) groups. Moreover, the sadness score also increased after the ruminative procedure for the (c) and (d) groups. Analysis about the impact of inattention on the ANT demonstrated that neither alert nor conflict components were altered whatever the experimental groups. On the contrary, the orientation effect was

eliminated for the (b) and (d) groups (respectively, $F < 1$; $F = 2.7$, NS). Inattention due to sadness and rumination only leads to the abolition of the orientation component of spatial attention for older drivers. This result suggests that when an older driver is inattentive, they normally prepare themselves to action (alert), they normally resolve conflict between contradictory road information (conflict), but they are “blind” to spatial information (orientation), which may have dramatic consequences on driving performances.

Keywords: attention and driving, attentional defects, sadness, rumination, spatial attention of older drivers

Impact of parenting skills training on the increasing of parent-child interactions and the decreasing of parental stress on parents of adolescent drug abusers

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The research was aimed to examine the effectiveness of parenting-skills training in increasing parent-child interactions and decreasing parental stress level of parents of adolescent drug abusers. Parenting-skills training included activities for parents with the adolescent drug abuser to learn and practice about: addiction and relapse prevention, parenting dimensions (care, control and communication), and identifying and managing stress. The research was conducted experimentally using a pre and post-test group design. The measurements were based on a scale which were carried out three times on the subjects, i.e. at pre-test, post-test-1 (after training), and post-test-2 (two weeks after the measurement). A quantitative analysis was done with one-way kovarians analysis. Furthermore, a qualitative analysis was done using the in-depth interview results, the training evaluation and observations during the training. The subjects of this study were 22 women who were members of Yayasan Arofah and which were split into a control group (11 women) and an experimental group (22 women). Subjects were mothers of adolescent drug abusers. The results showed that: (1) There was a significant difference in parent-child interactions before and after parenting-skills training in the experimental

group. Parent-child interactions increased after receiving parenting-skills training compared to before (post test 1 = 104,727 and post test 2 = 111,091). (2) There was a significant difference in parental stress level before and after parenting-skills training in the experimental group. Parental stress level decreased after receiving parenting-skills training (post test 1 = 80,455 and post test 2 = 75,818). (3) There was a significant difference between the experimental group and the control group in parent-child interactions after parenting-skills training. Parent-child interaction levels of the experimental group were higher than control group. ($F = 177,220$; $p < 0,010$). (4) There was a significant difference between the experimental group and control group in parental stress level after parenting-skills training. Parental stress level of the experimental group was lower than the control group ($F = 24,801$; $p < 0,010$). Parenting-Skills Training contributed to a 90.3% increase in parent-child interactions and 55.5% decrease in parental stress level.

Keywords: parenting skills training, parent-child interaction, parental stress, parents, adolescent drug abuse

Impact of value incongruence on work satisfaction: A gender marginality perspective

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Gender identity, when applied to organisational culture, is descriptive of the predominant beliefs about sex-roles, inherent within cultural values, mores and processes. Tenets of marginality and gender schema theory suggest that individuals who experience incongruence between their own gender identity and that of the organisation are more likely to experience adverse psychological effects. This study aimed to investigate the impact of marginality on work satisfaction for women and men across diverse segments of industry. It was hypothesised that gender identity incongruence would be a unique predictor of work satisfaction for both women and men. In consideration of the proposed links between incongruence and well-being, we also hypothesised that gender identity incongruence would mediate the relationship between work satisfaction and occupational stress. Participants

($N = 252$) completed a survey online or in hard copy which comprised scales related to gender traits, occupational stress (OSI-R; Osipow & Spokane, 1998) and work satisfaction (based on items adapted from the Job Descriptive Index). Two gender incongruence scales were used: Nurturance incongruence (related to stereotypically positive feminine traits) and Autonomy incongruence (related to stereotypically positive masculine traits). Results of a fully specified structural equation model suggest gender identity incongruence related to Nurturance rather than Autonomy as the marginality factor that predicted work satisfaction. Nurturance incongruence was a negative predictor of psychosocial resources, which in turn predicted the variance in occupational stress and work satisfaction. The findings of this study suggest that organisational values and practices that embody nurturance, such as empathy, compassion and a focus on concern for others may discriminate organisations on levels of marginality and vocational strain. Maintaining value congruence related to nurturance may indeed result in higher work satisfaction and less occupational stress for an organisation's employees.

Keywords: work satisfaction, occupational stress, gender identity, sex-roles, cultural values

Implicit gender-rationality stereotypes among successful counter-stereotypic women

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Women are underrepresented at the top of Mathematics, Science, and Engineering (MSE) education relative to men. One explanation is that women's knowledge of self-relevant negative gender stereotypes reduces their interest in pursuing a career in counter-stereotypic (i.e. masculine) domains. However, why do some women graduate in such domains and are highly successful? Possibly, they simply do not know the negative gender stereotypes. However, stereotypes are widely known in a given culture. Therefore, these women might be successful despite their stereotypic knowledge. Besides the extensively studied gender-math stereotype, women's perceived lack of

rationality is particularly relevant in MSE educational and professional settings. However, this gender-rationality stereotype has never been assessed at an implicit level, which is problematic because explicit stereotype measures are prone to social desirability bias. We created a new Implicit Association Test (IAT; Greenwald, McGhee and Schwartz, 1998) to assess implicit associations of rationality with men rather than with women. We tested this tool among highly successful graduate female and male engineering students and its relation with explicit stereotype measures (Study One). This IAT was also tested among larger samples of engineering and literature students (Study Two). In Study One, participants were 23 graduate engineering students attending very selective engineering schools (13 males). They completed the explicit stereotype measures and the gender-rationality IAT. In Study Two, participants included 117 similar engineering students (64 males) and 89 literature students (45 males) who all took the gender-rationality IAT. Study One's results showed a gender-rationality IAT effect among female and male engineering students, meaning that they implicitly associated rationality more with men than with women. Self-report measures did not show explicit knowledge of the gender-rationality stereotype, and no relation with IAT scores was found. Study Two replicated the gender-rationality IAT effect among engineering and literature students, with no difference between populations. Findings support the relevance of the new IAT to assess implicit stereotypes in the reasoning domain, which is particularly important given the superordinate nature and shortcomings of self-report measures. Successful counter-stereotypic women are so despite a real obstacle, signaling that efficient self-protective strategies may underlie their success.

Keywords: gender stereotypes, self-relevant negative stereotypes, gender rationality, implicit association test, self-report measures

Improving speed of processing in older and younger adults with HIV: A pilot study

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The co-occurrence of HIV and aging may lead to decreased speed of processing (SOP) which can interfere with performing instrumental activities of daily living. This becomes especially important when considering the growing population of older adults with Human Immunodeficiency Virus (HIV). The aim of this study is to determine if SOP training can improve this cognitive ability in adults with HIV. In this on-going pre-post-experimental study, 26 older and younger adults with HIV (26 to 70 years old; mean age = 46.27 ($SD = 9.14$)) were assigned to either the no-contact control group ($n = 9$) or to a SOP training group ($n = 17$). SOP training consisted of ten hours of computerized, self-administered training in the laboratory using the POSIT Science software. After approximately four to six weeks after the baseline assessment, participants were administered a post-test assessment. An intent-to-treat analysis was employed. Using the Useful Field of View (UFOV®) test, those in the SOP training group improved their performance by 209.65 milliseconds (ms) on average ($SD = 161.11$) while the control group improved by 14.67ms on average ($SD = 189.08$). This training effect was significant, $F(1,25) = 7.66$, $p = .01$, power = .76. Although age was significantly related to UFOV® performance in adults with HIV ($r = .33$, $p = .02$) in that older adults performed worse on this cognitive measure, age itself was not a factor in the treatment gains observed ($r = .22$, $p = .40$), which suggests that SOP training in adults with HIV is effective in improving SOP regardless of age. This study shows that cognitive training can improve cognitive functioning in adults with HIV. Implications for other applied interventions and future research are posited.

Keywords: *HIV, speed of processing, cognitive ability, self-administered cognitive training, adult cognitive functioning*

Impulsive buying and self control failure

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The impulsive purchase is a type of purchase that is more and more widespread in Western Society. Impulsive buying behaviour gives evidence of all impulsive acts (Giraud &

Bonnefont, 2000). It is described as more arousing, less deliberate, and more irresistible buying behaviour compared to planned purchasing behaviour. Highly impulsive buyers are likely to be unreflective in their thinking, to be emotionally more attracted to the object, and desiring immediate gratification (Hoch & Loewenstein, 1991). Previous researches (Rook & Fisher, 1995; Balikdjian & Pohl, 2008) demonstrate that impulse buying is positively linked to dispositional factors (Impulsiveness). In other words, cognitive considerations modify the impulse buying behaviour (Puri, 1996). The aim of this research is to try to understand impulsive buying behaviour as the result of a complex interaction between self control failure due to cognitive resource depletion and impulsiveness. One-hundred and ten people took part in this study. The design varied a single factor (cognitive resources availability). The participants were randomly assigned to one of the two experimental conditions: with or without cognitive depletion task. In the condition "with cognitive depletion task", participants were asked to respond to a culture-free intelligence test. After the time devoted to this test elapsed, participants engaged online buying. After that, participants responded to an Impulsiveness scale (Neo PRI) and impulse buying measure (Rook & Fisher, 1995). Results show a positive relation between impulsive buying and impulsivity. Furthermore, an overview of the means of impulse buying suggests that non-impulsive individuals in the depletion condition are higher than in the control condition. There are no differences between the two conditions for the impulsive individuals. According to the self control failure framework, consumers will increase impulse buying behaviour when they face cognitive resource depletion in a specific context. Nevertheless this relation is observed only for the "non impulsivity consumers".

Keywords: *impulse buying, impulsivity, cognitive resources availability, cognitive depletion, cognitive depletion tasks*

Incivility: A qualitative analysis across differential power distributions

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Acts of disrespect such as incivility are common in and outside the workplace, and studies have shown that victims tend to suffer negative consequences. This study aims to understand how power dynamics (formal and informal power distribution) affect the incidence of and responses to incivility. Utilizing a qualitative approach, 177 undergraduates with work experience were asked to write about an incident in which they were treated with disrespect at or outside work. They provided details about the act itself, the context in which it occurred, the consequences of the event, the impact of the experience and finally the action taken to resolve the issue. Incivility was found to be perpetrated across conventional relationships between peers and superior-subordinate associations as well as non-conventional ones, when the relationships were based on an informal distribution of power. The most prevalent acts of incivility were of the Direct Verbal form (43%) when victims were formally or informally lower in status as compared to the perpetrator. In contrast, the Behavioral form (31%) of incivility was common when the perpetrator was formally or informally of a lower status. There were very few cases when the incivility spiraled into another act of incivility (15.25%) and this was generally found in those relationships that had an informal hierarchy or where the victim was of a higher formal status. Most victims received some form of support after the incivility (69%). Emotional support was mostly provided to victims who were formally or informally at a lower status as compared to the perpetrator. On the other hand, instrumental support was given to victims who were formally and informally of higher status and to the victims who were informally in a lower status. In more than 85% of the cases where support was provided it helped the situation. The acts of incivility were brought to the perpetrators notice mostly when the victim was formally in a higher status. Following which, usually an apology was rendered in these situations. Incivil acts vary in their nature and consequences across formal and informal power distributions.

Keywords: *Incivility, Power distributions, Disrespect, Victim, Perpetrators*

Increasing adaptive motivation through information enhancement and goal setting

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The aim of the current study was to develop and experimentally validate factors that increase individual's Adaptive Motivational Structure (AMS). AMS promotes successful goal attainment and emotional satisfaction in life, whereas Maladaptive Motivational Structure (MMS) hinders people from effective goal seeking. Evidence shows that decisions to drink are more likely when the individuals are unable to achieve emotional satisfaction through other goal pursuits or to overcome miseries in their lives. Through an experimental study ($N = 144$, 38% males), we tested the relative and combined effects of enhancement information (including, choice, knowledge and feedback) and goal setting as two motivational techniques while participants were completing a series of experimental tasks (i.e., Computerized Conceptual Cards, Anagrams). The design was a 2×2 (i.e., control group; goal-setting group; information group and combination group) factorial that included pre- and post-test measures, including the Task Specific Personal Concern Inventory, Task Specific Sense of Control Inventory and Task Specific Intrinsic Motivation Inventory. The results showed that the greatest increase in AMS resulted from the combined technique, and the order of the groups on the post-test was: Combination Group (enhancement information and goal-setting) > Information Group > Goal-Setting Group > No-Intervention Group. In addition, a 45-day follow-up assessment showed that the Combination Group's task-specific AMS continued to increase after the post-experimental assessment. The implication of the motivational enhancement techniques for intervention, education, and prevention will be discussed.

Keywords: *motivation, information enhancement, goal setting, adaptive motivational structure, maladaptive motivational structure*

Individual and environmental predictors of psychological capital

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This research examined the impact of trait-like qualities (like Five Factor Model and Core Self Evaluations), and environmental settings (like People-Organization Fit and People-Job Fit) on Psychological Capital, in order to find out its formation mechanism in organizations. A total of 339 employees from various industries in China participated in the research. They were requested to finish the questionnaires of Psychological Capital, Five Factor Model, Core Self Evaluations, People-Organization Fit, and People-Job Fit. Results indicated that Psychological Capital is significantly influenced by individual's personality characteristics, the environmental variables, and their interactions. When there is a good match between people and job, as well as people and organization, trait-like qualities help to form high Psychological Capital. The poor match with the environment weakened the relationship between trait-like qualities and Psychological Capital. It is suggested that when developing Psychological Capital, organizations may adjust the environment conditions to make full use of the trait-like qualities of individuals in improving Psychological Capital.

Keywords: psychological capital, trait-like qualities and environmental settings, big five model of personality, people-organization fit, core self evaluations

Influence of achievement goal orientation on goal setting and study behaviour in computer training

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Goal setting theorists (Locke & Latham, 2002) have shown that self-set personal goals mediate the relationship between personality (e.g., achievement) and performance. Goal orientation research distinguishes between mastery (learning) and performance orientations. Goal orientation been used as

distal personality factors in comparison to self efficacy and state anxiety (proximal factors) in learning performance research (Chen et al, 2000). An integration of theories of goal setting and goal orientation has been tested (Seijts et al, 2004), but not with goal striving (Gollwitzer & Sheeran, 2006), as a useful extension to understand training behaviour. The aim of this study was to ascertain direct and indirect effects of goal orientation, self efficacy and state anxiety on goal setting processes and learning behaviour in a computer training context. Undergraduate students in an introductory Information Systems subject completed three questionnaires (before training, following mastery training and prior to an examination). The questionnaires measured goal orientation, application specific computer self efficacy (CSE), computer anxiety (CA), personal goals (PG), and the effort taken in learning and study strategies undertaken for learning a software application. Participation in this study was voluntary and 166 students completed all three phases of the study. Following tests of measurement reliability and validity, a structural model was tested using path analysis. The tested model showed good model fit (chi square 20.7; $df = 15$; $p > 0.1$; NFI = 0.92; IFI = 0.96; TLI = 0.91; CFI = 0.97; RMSEA = 0.039). The overall model explained 17 per cent of study effort and study behaviour. Mastery approach was significantly related to CSE ($\beta = 0.17$; $p < 0.05$), PG ($\beta = -0.21$; $p < 0.01$), and study behaviour ($\beta = 0.27$; $p < 0.01$), but not CA ($\beta = -0.13$; $p > 0.05$). Performance approach was significantly related to CSE ($\beta = 0.25$; $p < 0.01$), CA ($\beta = -0.27$; $p < 0.01$) and effort ($\beta = 0.20$; $p < 0.05$). Mastery Avoidance was related to CA and performance avoidance to CSE. CSE and CA had significant effects on effort for studying, but did not mediate the effects of mastery and performance goal orientation on effort and behaviour. The study provides evidence of the direct roles of mastery and performance approach in goal setting and goal striving behaviour in computer training. Interventions that enhance mastery orientation result in more engaged and successful strategies for learning.

Keywords: goal orientation, goal setting, mastery approach, trait anxiety, self-efficacy

Influence of protected values and framing effect on omission bias under managerial decision situations

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The aim of this research was to reveal how protected values and framing effects could impact on omission bias in managerial decision situations. This study designed three questionnaires to simulate managerial situations. Questionnaire One measured the subject's protected values and uniformity between his/her recognition and action; Questionnaire Two contained nine scenarios, each divided into "action" and "omission" where framing effects (positive versus negative) and output certainties (risky versus secured) were introduced and where the subject was asked to make choices between "action" and "omission". Risk preference was applied in Questionnaire Three. A survey on Master of Business Administration students showed evidence of protected values in decision-making. Managers made choices under the control of their protected values system and in accordance with different management tasks which included framing effects and output certainties. The results indicated that: 1. Protected values do exist in management and they do not substantially vary with position and ownership structures. Mismatch is noticeable between recognition and action. 2. In "action" scenarios, preference to action is significantly and positively correlated with protected values, the same as it is in "omission" scenarios. Protected values will not only prevent certain behaviors, but also initiate and execute. Action and omission are both demonstration of protected values. 3. Either in "action" or "omission" scenarios, subjects with firm protected values make decisions in favor of protected values regardless of framing effects and output certainties. In scenarios where the output was secured, framing effects would further justify the subject's decision: to take actions preferable to the positive frame in "action" scenarios while to withhold under the negative frame in "omission" scenarios. However, the subjects with swerving protected values have preference to neither action nor omission. Their decision is subject to framing effects and output certainties.

Under the positive frame, they tend to secure their benefits actively. Under the negative frame, they opt for risky outputs to minimize losses.

Keywords: *protected values, framing effect, managerial decisions, omission bias, risk preference*

Initial standardization of the Oxford happiness test on students of the Islamic Azad University - Roodehen Branch, Iran

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The present study had two goals. These were the standardization and assessment of rate of validity and reliability of a happiness assessment scale and to review the relationship between happiness and gender. The present study is a field study using exploratory research that has been done based on classic psychometric theory and this investigation is in the test construction area. From the total population of male and female students of Islamic Azad University, Roodehen branch, who were studying in academic year of 2008 to 2009, 500 students (250 boys and 250 girls) were selected by stratified random sampling. The research tool was translated from Oxford Happiness Scale Form to Farsi language. The alpha reliability coefficient calculated for total group score was 0.9, for the male group it was 0.882 and for the female group 0.916. The first factorial analysis output that was a 29 x 29 matrix showed there was a positive correlation between almost all questionnaire subjects of the present study, and more than 70% of matrix correlations were statistically significant. The "Scree" model showed that probably was a major factor that dominated all questionnaire subjects. The greatest difference between males and females actions in the Oxford Happiness Scale was that the females' mean of 122.32 was higher than the males' mean by 116.68. This difference is significant. After ensuring of Oxford Happiness Scale validity and reliability for the study group, the totally norm of both the genders were tabulated, which can be used for all

psychologists and counselors in case of clinical diagnoses.

Keywords: *happiness assessment scale, test development, classic psychometry theory, scale validation*

Insights into mindful-based art therapy practice for anxiety: A case study

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Mindfulness-based techniques can be used by art therapists to engage a deeper level of understanding in the treatment of anxiety. This presentation focuses on how mindfulness-based strategies assisted the therapeutic art process; as an impetus for the cathartic release of emotions, as a holding space for difficult feelings, and as a visual language resource for processing multidimensional layers of anxiety. A brief overview of the theoretical rationale and techniques used to assist a 30-year-old woman who presented with anxiety are introduced. In translating theory to practice, a single case study summarizing 16 weeks of therapy illustrates how multimodal therapy led to deeper insights and direct involvement in the management of anxiety. Where the process enabled the client to draw on a range of inner resources, outcomes show greater psychological flexibility around the emotional tone which had previously kept her stuck. This method illustrates how mindfulness-based techniques enhance art therapy intervention and facilitate a deeper understanding of anxiety experience.

Keywords: *mindfulness, anxiety, multimodal therapy*

Intergenerational knowledge transfer as a matter of organizational culture?

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Central European countries like Austria are facing a severe demographic change due to the mandatory retirement age being raised. This

leads to changes in the age-composition of the workforce and increases the importance of intergenerational knowledge transfer. To this end, knowledge management systems and databases have been developed, but practice has shown that these systems are not the best way to transfer knowledge. The project "Diversity and Knowledge Management", funded by the Austrian National Bank, aims to analyze the possibility of using the knowledge of elder workers in age-mixed teams as the key success factor. The analysis focuses on factors that enhance intergenerational knowledge transfer, including intra-company conditions as well as psychological factors. To identify these factors interviews and discussion groups with members of all hierarchical levels have been conducted in small and medium enterprises across different sectors. The qualitative data have been analyzed using atlas.ti. The approach is based on a triangulation of Grounded Theory (Strauss & Corbin, 1996) and Qualitative Content Analysis (Mayring, 2007). The results show that the crucial factors for successful knowledge management are based in organizational culture and leadership. These results demonstrate that developing successful knowledge management in companies is a tedious venture, as it means, in certain circumstances, changing the organizational culture. However the results also show that successful knowledge management has clear advantages for companies.

Keywords: *intergenerational knowledge transfer, knowledge management systems, organisational culture, organisational leadership, age-composition of the workforce*

Intervention study of different person narrative on personality development

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Three studies manipulated memory perspective (first-person versus third-person) individuals used to recall autobiographical events and examined its effects on personality development. A correlational study (Study 1) using the Cattell-16PF questionnaire was done to examine college students who use different memory perspectives. Intervention studies (Studies 2 and 3) used a standardization semi-

structured life story interview to examine different perspectives and different person narrative style effects on personality development. In Study 2, participants ($n = 37$) wrote, and in Study 3, participants ($n = 12$) discussed in group psychotherapy. Participants in each study were divided into two groups: first-person and third-person. The results of Study One showed that there were significant differences between the participants who used third-person perspective and those who used first-person perspective in E, G, Q1. Results of Studies 2 and 3 showed that (1) participants in Study 2 have more changes in personality than those in Study 3. In two studies, Q1 were all changed, and (2) the participants who used third-person had more changes in personality than those who used first-person. In two groups, H, Q1 were all changed (1) third-person narrative has more effects on personal change than first-person narrative; (2) as means of intervention, individual writing was more effective than group psychotherapy discussion; (3) after the intervention, there were changes in H, Q1 of personality; and (4) different person narrative could be used as an intervention approach to influence personality development.

Keywords: memory, autobiography, recall, narrative style, personality

Introducing a new leader: Building explicit and implicit trust

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Trust toward a new leader is important since it facilitates the followers' cooperative behavior. Previous research suggested that trust is built when followers perceive the leader's trustworthiness (e.g. ability, integrity, and benevolence, Mayer et al., 1995). However, followers may process the leader's trustworthiness not only in an explicit (conscious evaluations of trust) manner, but also in an implicit manner (non-conscious associations between leader and trust). Study One examined how conscious and non-conscious associative processes could influence the formation of explicit and implicit trust toward a new leader. In Study Two, we considered a common phenomenon in which followers hear rumors

about a leader before meeting them and examined how positive or negative rumors would influence the formation of explicit and implicit trust. In Study One ($N = 125$), participants completed explicit (self-report) and implicit (Implicit Association Test-based) trust measures at Pre-test. Then, they were randomly assigned to either a Reading group which read about the leader's trustworthiness (i.e. conscious processing), or a Conditioning group which conducted a lexical decision task which subliminally exposed participants to associations of the leader with trust (i.e. a non-conscious processing), or a Control group which took a break for ten minutes. At Post-test, the same measures were completed as in Pre-test. In Study Two, an identical procedure was used as in Study One, but all participants ($N = 142$) were presented with positive or negative rumors before Pre-test. Unexpectedly, in Study One, the Reading group showed higher explicit and implicit trust compared to controls, while the 'Conditioning' group showed no higher explicit and implicit trust compared to controls. In Study Two, positive rumors resulted in significantly higher explicit and implicit trust in Pre-test than negative rumors. The manipulation effect was largely replicated Study One. In conclusion, providing information of trustworthiness may be critical in forming both explicit and implicit trust, since consciously processing such information was effective in forming explicit and implicit trust while non-conscious associative processing had no effect, and, in addition, this pattern was not affected by positive or negative rumors.

Keywords: perceived leader's trustworthiness, implicit evaluations of trustworthiness, implicit association test, non-conscious associative processing, effect of rumors

Investigating Socially Desirable Responding (SDR) in volunteer selection: Stakeness, helping motivation, and double rating method

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This paper investigates the effect of situational stakeness, helping motivation, and rating methods on Socially Desirable Responding (SDR) in volunteer selection. It hypothesises that whether volunteers fake in selection tests

depends on their helping motivation. When they are self-oriented, they fake to secure their personal interests associated with a successful application. When they are other-oriented, they do not fake as they associate less personal interests with volunteering. In addition, the study investigates the effect of a Double-Rating Method (DRM) on reducing SDR among the volunteer sample. Subjects were 178 Hong Kong students recruited from a local university. The researcher manipulated the level of stakeness into high or low by inviting participants to complete an online personality test for volunteer selection or anonymously answer an online personality test for research purposes. The Balanced Inventory of Desirable Responding (Paulhus, 1984) were administered in both conditions. Participants were also randomly assigned to either a single or double rating method. Finally they were required to complete a set of online questionnaires concerning their helping motivation including the Volunteer Functional Index (Clary et al., 1998) and, the Interpersonal Reactivity Index (Davis, 1983). Results showed that SDR related positively and significantly to situational stakeness and other-oriented helping motivation. This suggests that the selection pressures volunteer applicants to overrate themselves, albeit related to their wish and inability to help others. In addition, administering a double rating method did not control SDR as suggested by previous literature. This suggests the effect of the double rating method may be hampered by computer administration. Investigating the effect of stakeness, helping motivation, and rating method on SDR, the study shows that both stakeness and other-oriented empathy is highly and positively associated with SDR. This causes people to reflect on their reasons for volunteering and their effects on clients. Together with the failure of DRM in controlling IM in the current study, this study suggests the use of personality tests in volunteer selection warrants caution.

Keywords: socially desirable responding, volunteer selection, stakeness, helping motivation, double-rating method

Investigation of actual truth-telling for patients with Duchenne Muscular

Dystrophy: Interviews with patients and their families

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Muscular dystrophy (MD) is a genetic disorder that weakens the muscles that help bodily movement. Because MD is genetic, patients who have this disease are born with this problem. MD weakens muscles over time, so they gradually lose the ability to do the things most people take for granted. Although truth-telling about the diagnosis is said to be important, the realities of truth-telling are not known well in Japan. In this study, we tried to investigate actual conditions of truth-telling for patients and their family of Duchenne muscular dystrophy (DMD), the most common type of MD. We interviewed 15 DMD patients in the hospital. The Questions were: 1. Who explained about the sickness? 2. How did you feel at that time? 3. What is the ideal way of truth-telling or preferable notification? This study have approved by Ethical Review Committee of the hospital that cooperated in this research. We interviewed 13 patients in the hospital, and were refused by two patients. The range of the age was from 18 years to 46 years old. Many patients answered that the illness was explained to them when they were in middle grade of elementary school by a doctor. However, there were a few patients answered that they noticed naturally by seeing other patients when in hospital. The typical way of explain was "your muscle will become weak little by little, you will not be able to walk in the future". Though there were few patients who had emotional disturbance after truth-telling, many patients said that they didn't feel anything or the illness felt out of touch with reality because they could move their limbs at that time. Many families expressed discomfort at having to broach the topic of the prognosis, including limited life expectancy, and some withheld information or not disclosed the prognosis. On the other hand, the majority of patients with DMD have high information needs concerning its prognosis. We concluded that health professionals and families of the patients of DMD, should make an assessment about what the patient does not know, what they want to know and whether

they understand the actual conditions of the illness or treatment.

Keywords: muscular dystrophy, notification of a diagnosis, information needs concerning prognosis, truth-telling to patients

Is integrity universal across cultures? Conceptual and measurement challenges

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Few traits are as important for employee performance as that of integrity, and measures of integrity are widely used in personnel selection around the world as a result. Previous research has suggested that when using tests in different countries cross cultural measurement equivalence should first be established (Vandenberg & Lance, 2000). However, underlying this requirement is the implicit assumption that the construct in question is in fact the same in each country. Recent research indicates that the meaning of several constructs often used in applied psychology can differ cross culturally (Köhler & Berry, 2008; Fischlmayr, Lähteenmäki, & Saarinen, 2007). The current study therefore assesses the cross cultural meaning of integrity in the context of personnel selection, and discusses the implications for measurement equivalence requirements. Data was collected using items from a typical overt integrity test measuring attitudes towards societal norms, the sanctioning of counterproductive behaviors, and personal admissions of wrongdoing. Participants were job applicants from four countries: Israel ($N = 4896$), Mexico ($N = 6261$), Ukraine ($N = 4700$), and Colombia ($N = 2268$). These samples were chosen to represent four culturally distinct country clusters. The data were analyzed using multidimensional scaling and multiple group confirmatory factor analysis techniques. While reliability analyses showed that the integrity test is consistently scored across the four countries, multidimensional scaling and factor analysis found significant differences between the four countries. This study goes beyond previous research, which has found the extent of dishonest behaviors to differ cross culturally (Doh et al., 2006), by suggesting that the very

concept of integrity may take on different conceptual meanings in different countries. As a result, in order to fully understand and accurately measure the concept of integrity, cross cultural differences need to be considered carefully. Furthermore, the universal requirement for demonstrating cross cultural measurement equivalence may be inappropriate for constructs that are shown to differ in their underlying concepts, such as integrity. The implications for international integrity testing in personnel selection will be discussed.

Keywords: personnel selection, international integrity testing, integrity, cross cultural measurement equivalence, cultural meaning of integrity

Is it more than medicine? The impact of optimism and illness perceptions on quality of life after total hip replacement surgery

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The common treatment method for coxarthrosis - the arthrosis of the hip joint - is total hip arthroplasty (THA), a replacement surgery with good outcome rates and low risk of complications. Recovery after surgery is highly influenced by psychological factors. The main purpose of our study was to examine whether pre-operative optimism and illness perceptions determine quality of life three months after THA. The sample consisted of patients undergoing THA for the first time. The participants had to fill out questionnaires immediately before and three months after the intervention. Data about optimism (LOT-R) and illness perceptions (IPQ-R) were collected prior to the surgery while data about quality of life (EQ-5D) both pre- and postoperative. One hundred and forty patients were included in the investigation, with a mean age of 56.3 ($SD = 12.6$), 65% being female. Gender differences were found in the specificity of quality of life, women having lower ratings both before and after surgery. Multiple linear regressions were used to calculate the relative effect of optimism, illness perception and age on the postoperative outcome. The outcome in

women was determined by optimism and personal illness control, explaining variance of 27%, while in men illness consequences and age were the most relevant factors, explained variance being 36%. In the whole sample, optimism, illness identity and age accounted for postoperative quality of life, explaining 20% of variance. Our findings indicate that optimism and illness perceptions are important predictors of quality of life after THR surgery. Thus the results highlight a meaningful starting point for further design and evaluation of patient's training in order to enhance recovery after surgery.

Keywords: optimism, illness perceptions, quality of life, surgery recovery, illness identity

Is quitting smoking bad for your mental health? Reports of depressive symptoms among quitline callers with and without a depression history

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Many clinicians and scientists believe smoking cessation increases the risk of Major Depressive Disorder (MDD), particularly among smokers with a depression history. This study tested this hypothesis within the context of a state-wide quitline callback service that offers a specialised service for depression-history smokers. Three groups of smokers were followed over six months: 1) Disclosed current depression to quitline, ie. doctor diagnosed depression and use of anti depressant medication or depressive episode within last 6 months, $n = 199$; 2) Disclosed past depression, ie. prior doctor depression diagnosis, no use of anti-depressant medication or depressive episode within last 6 months, $n = 120$; 3) No depression history disclosed, $n = 483$. Telephone interviewers contacted participants at baseline (ie. following initial call to quitline), two months (74% response rate, no differential drop-out) and six months (70% response rate, no differential drop-out). The Patient Health Questionnaire (PHQ-9) measured depressive symptoms. Quitters were

less likely to report experiencing two or more weeks of feeling depressed at both two and six months whatever their depression status (six month figures: 16% quitters versus 34% failed, 37% non attempters). Overall, there was a decrease in depressive symptoms between baseline and six months, which was attributable to successful quitters reporting less depressive symptoms and this was not related to depression status. At both follow-ups, around ten percent of participants reported a significant increase in depressive symptoms to major/severe levels. This was not statistically associated with whether people had quit or not, but was related to depression status, ie. more likely among current depression group (18%) versus past (11%) or no depression (5%). Quitting smoking was associated with improved mood and was not reliably associated with precipitation or exacerbation of MDD. The findings allay concerns about the safety of quitting for smokers with a depression history and have resulted in quitline policy and practice changes.

Keywords: major depressive disorder, depression history, quitting smoking, mood, depression

Is Rugby bad for your intellect? The effect of repetitive mild head injuries on the neurocognitive function of university rugby players

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The objective of this study was to compare university level players of Rugby Union (hereafter rugby) with non-contact sport controls in order to identify indications of neurocognitive deficit amongst rugby players in association with long-term participation in the game. A non-clinical population of top team university rugby players ($n = 27$) and university level non-contact sports controls ($n = 18$) were tested at pre-season and post-season on the ImPACT test, Trail Making Test A and B (TMT A and B), and Digit Span Backwards and Forwards. The comparative groups were evenly distributed for race and language, and broadly equivalent for age, education and IQ, although rugby players had a history of more concussions than

controls ($p = .001$). All neurocognitive measures were subjected to repeated measures two-by-two factorial ANOVAs, and effect sizes were calculated. Results revealed significant lowering for rugby players relative to controls at the post-season interval for attentional tasks with a speeded visuomotor component (ImPACT Visual Motor Speed; TMT A and B). There was a practice effect for controls only between the pre and post-season intervals for attentional tasks that commonly reveal improvements after a long retest interval (TMT A and B; Digits Backwards). Medium to large effect sizes were demonstrated in respect of the obtained significant results. It was concluded that clinically relevant cognitive vulnerability was implicated for university level rugby players in association with years of exposure to repetitive concussive injury.

Keywords: repetitive concussive injury, neurocognitive deficit, trail making test, digit span backwards and forwards, cognitive vulnerability

Japanese pet ownership psychological and social challenges

KIKUCHI, K. (Teikyo Heisei University), OSADA, H.

Due to a congested population, many dog owners in Tokyo have trouble when they let their dogs off the leash. Dog owners want to build a leash free area for their dogs, and volunteers and the local government started trial community Dog Runs in 2007. We conducted surveys at these events during 2008 and 2009 and evaluated the potential of community "Dog Runs" based on participants feedback. The location was in the southwest part of a Tokyo suburb at a public park, next to a river bank and walking path, with an area of 7500m², surrounded by a plastic fence. Visitors to the event agreed to participate in the survey and we handed out survey papers to each dog owner. The survey points were; demographics, living area, usual dog walking area, event information access, user evaluation, and comments. Approximately 60% of the 81 participants were female. Most of the participants were around 40 years of age, lived nearby and used the area for walking their dogs. Participants acquired information from various sources including posters, word-of-mouth, leaflets and visually. Participants felt that this

event gave them an opportunity to meet other pet owners, share information, relax, have some community involvement and learn about pet ownership. They thought it was a positive activity for everyone (pet owners and non-pet owners) in the community. The event encouraged dog ownership and gave people a chance to think about the responsibilities of pet ownership. It was felt that the Dog Runs were a positive activity but not easy to set up. The area was viewed as a community meeting place and a chance to exchange ideas and the event enhanced social networking and built social capital. Due to the pet boom in Japan, local governments and their citizens are under pressure to accommodate the growing number of pet needs. The Dog Runs had many benefits but it was difficult to evaluate the overall positive effect within the community.

Keywords: pet ownership, dog owners, Japan, dog runs, community

Job burnout, job satisfaction, and turnover intention: The moderating role of conscientiousness

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The aim of this research was to estimate the prevalence of burnout and the level of job satisfaction and turnover intention among production line workers, and to examine conscientiousness as a moderator of the relationship between job burnout, job satisfaction and turnover intention. Questionnaires were sent to front line workers who participated voluntarily. The sample consisted of 526 production line workers who were surveyed for their job burnout, job satisfaction, turnover intention and conscientiousness. Hierarchical regression was performed using job burnout, conscientiousness, and the product of them as explanatory variables, and job satisfaction and turnover intention as the outcome measures. The results showed that job burnout was not related to job satisfaction for those low in conscientiousness, but for individuals high in conscientiousness, those who were higher in job burnout were lower in job satisfaction. In addition, those high

in job burnout had high turnover intention, and the relationship between the two variables was stronger for those high in conscientiousness than those low in conscientiousness. This study has shown a high turnover intention and a moderate prevalence of burnout and job satisfaction among production line workers. The results also indicate that employees with high conscientiousness would be more adversely affected by job burnout than those with low conscientiousness.

Keywords: job satisfaction, burnout, turnover intention, conscientiousness, production line workers

Job crafters perform better because they enjoy their work more: Test of a double mediation model

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In this study it is investigated whether one aspect of job crafting, namely increasing one's structural job resources (autonomy and variety) leads to better in-role and extra-role performance mediated by work enjoyment. Job crafting is operationalised as the self-initiated changes that employees make in their own level of job resources. Job resources are seen as those work characteristics that enhance work performance, individual growth and learning and buffer against the negative effects of high job demands. Furthermore, we investigated the role of state self-efficacy as a predictor of job crafting. We performed a diary study in which 35 employees participated. They filled out short questionnaires during five successive working days, which led to 175 data points in total. With this amount of data points there is enough power to investigate the hypothesized model. A diary study enables us to study whether the hypothesized relationships also hold on day-levels. The results of this study support our hypothesised double mediation: employees who scored high on state self-efficacy on one day were also more likely to craft more job resources on that day. This increased level of autonomy and variety in turn enhanced their work enjoyment. Finally, employees who enjoy their work are more likely to perform well on in-role

tasks and on extra-role tasks. Job crafting may be an important means to keep employees motivated because they can craft tasks or responsibilities they find interesting. For an organisation this may be a time saving method to invest in the work enjoyment of their employees. As a consequence, this study showed that employees who enjoy their work more perform better on their own tasks but also on tasks that are not prescribed in their jobs (i.e. extra-role).

Keywords: job crafting, job performance, autonomy, work variety, self-efficacy

Job insecurity and employees' job performance, and well-being: The moderating effect of supervisor support

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Job insecurity is becoming one of the serious stressors in the workplace, especially during the current times of economic crisis. The present study aimed to examine the relationships among job insecurity and job performance, and well-being, and focused on the moderating effect of perceived supervisor support (PSS). A self-administered questionnaire survey method was used to collect data from 387 subordinate-supervisor dyads in diverse Chinese organisations, and employees' job performance was rated by his/her supervisor. A series of hierarchical regression analyses were conducted for data analyses. The results showed that job insecurity was negatively associated with both job performance and well-being. Moreover, PSS buffered the relationship between job insecurity and job performance. Specifically, employees with higher PSS would react less negatively to job insecurity than those with lower PSS. However, PSS did not have any moderating effect on the relationship between job insecurity and well-being. The present study revealed that job insecurity had emerged as one of the serious job stressors which negatively impacted employees' job performance and well-being in the Chinese context. Furthermore, supervisor support was found to be an important resource to employees in resisting the adverse effect of job insecurity on job performance.

Keywords: *job insecurity, job performance, well-being, supervisor support*

Juror perceptions of alibi evidence in the presence of a positive, foil or non-lineup identification

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Recent research on alibi perceptions suggest that the believability of an alibi is highly dependent on the relationship between the suspect and the corroborating witness, where an alibi corroborated by a stranger is perceived as more credible than one corroborated by a close other. However, jurors also seem to be greatly influenced by an eyewitness' positive lineup identification (ID) of a suspect. The purpose of this study is to examine how the type of lineup identification decisions made by an eyewitness influences jurors' perceptions of more or less credible alibi evidence. This study was a 3 (eyewitness identification: positive ID versus foil ID versus non-ID) X 3 (alibi corroboration: no corroborator versus family member versus stranger) between subjects design. One hundred and eighty psychology students read a mock trial transcript of an attempted murder case. In the transcript, an eyewitness testified to have made one of three line-up identification types: 1) a positive identification of the defendant, 2) an identification of a foil, or 3) a non-identification. The trial transcript also included testimony regarding the defendant's alibi, which was either 1) corroborated by a family member, 2) corroborated by a stranger, or 3) not corroborated. The dependant variables included guilt ratings, verdict, and ratings of the credibility and reliability of the eyewitness, the corroborating witness (when present), and the alibi itself. Preliminary results suggest that although mock jurors perceive an alibi that is corroborated by a stranger as more reliable and credible than an alibi corroborated by a family member or by no one at all, alibi corroboration does not significantly influence verdict nor guilt ratings. There was, however, a weak interaction between alibi corroboration and eyewitness identification on jurors' perceptions of the reliability of the alibi corroborator's testimony. Family corroborators are perceived as most

credible when a non-identification is made by the eyewitness. No such interaction was observed on verdict and guilt ratings. These results are a further indication of the overwhelming influence that eyewitness identification has on potential jurors' verdict decision, even in the presence of other evidence that, in the absence of eyewitness testimony, has been shown to influence verdict.

Keywords: *alibi corroboration, eyewitness accounts, juror perceptions, verdict, alibi believability*

Jyotir Dhyana - A pilot study in enhancement of immediate memory

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The aim of this research was to study the effect of *Jyotir dhyana* in male college students. *Dhyāna* is a Sanskrit word that is derived from the verbal root *dhyai* which means to contemplate, to meditate, to think. It is the most common designation both for the meditative state of consciousness and the yogic techniques by which it is induced. In the Gheranda-Samhita (6.1-3), a celebrated text book of Hatha-yoga, it has been described that the dhyana is of three types viz. 1. *Sthula* (coarse), 2. *Jyotir* - (luminous) and 3. *Sukshma* - (subtle). *Jyotir-dhyana* is the contemplation of the Divine as a mass of light either in the lowest psycho-spiritual center of the body, the *muladhara-chakra* or in the *ajna-chakra* highest psycho-spiritual center. A pilot study was conducted with 40 male college students (ranging from 20 to 30 years of age) were taken from some departments of Banaras Hindu University, Varanasi. First they were screened for immediate memory on immediate memory digital span scale. Then the students were given training of *jyotir dhyana* on *Ajna chakra* and asked to practice regularly. After one month, the students were again rated on the same scale. The results indicated that students who received the training of *jyotir dhyana* showed the significant increase in the memory span scale. On the basis of present study it is concluded that *jyotir dhyana* enhances memory and the power of concentration, probably by stimulating the *Ajna Charaka* (that is, the highest psycho-spiritual center).

Keywords: *meditation, thought, contemplation, divine thought, concentration*

Kapwa in the workplace: A preliminary study of using cultural values for engaging Filipino workers

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Migration and outsourcing has placed Filipinos in many global organizations. As such, the need for understanding their culture and leveraging this to engage the Filipino at work is becoming more important in the global environment. The purpose of the research was to examine the understanding and use of core Filipino values (*malasakit, pananagutan* and *bayanihan*) in organizations. Prior to this study, there have been few attempts to empirically validate the use of Filipino values in the workplace and how best to manage Filipino workers by acknowledging and utilizing their culture and value system. In this preliminary study, five high-performing Filipino organizations participated in *ginabayang talakayan* (GT) (indigenous focus group discussions) of groups of employees - one GT for staff levels and another for managerial levels. These were then supplemented by interviews of their Human Resources Directors or the person directly responsible for culture and organization development in the company. The questions for both methods centred around their understanding of each value, how these values can be seen in the workplace, and how these values are utilized by the company in terms of human resources practices and programmes. The data collected was analyzed using the KJ method. The data showed a consistent definition for each of the values, generating a better understanding of *malasakit, pananagutan* and *bayanihan*. Human Resources policies and programs tended to vary between the organizations, but seemed to produce the same engagement and commitment of the employees. The consistency of definitions for the three core Filipino values seems to indicate that the understanding of these among Filipinos is deep seated. As such, the understanding and

reflection of these in programs and policies may in fact be useful in engaging and managing Filipino workers in the global environment. More studies along these lines need to be attempted to further our understanding of Filipino work culture.

Keywords: *migration, global organizations, human resources, work environment, employee engagement*

Ketamine as a model for semantic memory deficits in schizophrenia

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The glutamate/ketamine model is gathering support as a useful adjunct to the dopamine hypothesis of schizophrenia (Javitt, 2007), one reason being that ketamine is capable of eliciting the cognitive deficits associated with this illness including those seen in semantic memory (Adler et al., 1998; Morgan et al., 2005). Two recent reviews (Rossell & Stefanovic, 2007; Pomerol-Clotet, et al., 2008) have found larger than normal indirect semantic priming affects in schizophrenia suggesting an abnormality in implicit access to indirect relationships. In the current study, implicit and explicit tasks were employed to examine access to direct and indirect relationships in the semantic network. The purpose was firstly to see if the indirect priming findings from the schizophrenia literature can be replicated in a ketamine group (providing support for the ketamine model) and secondly, to determine whether such abnormalities are restricted to the indirect, implicit nature of the task or whether they are more wide spread and detectable in explicit and direct tasks. Should ketamine mimic schizophrenia deficits closely, then the answer to the second question will help to determine the nature of the semantic memory deficit in schizophrenia. This was a double blind placebo controlled cross over design. On one occasion, participants received ketamine, on the other, saline. On each occasion, participants completed a battery of semantic memory tasks along with measures of psychosis and dissociation. The results showed statistically significant indirect priming under the influence of ketamine but no

significant indirect priming in the same individuals in the placebo condition. In addition, ketamine only disrupted semantic access significantly on indirect tasks. Priming effects under ketamine matched those seen in schizophrenia offering support for the ketamine model. Further, semantic memory deficits were found to be associated with indirect relationships regardless of the implicit/explicit nature of the task.

Keywords: *cognitive neuropsychology, glutamate ketamine model of schizophrenia, cognitive deficits, semantic memory, psychosis*

Knowing your team members: Its effects on incivility and trust in work teams

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The current study focuses on the functional role of knowing team members in reducing incivility and increasing trust in a team context. The study intends to extend the current literature by (1) Examining incivility and trust in a work team context, (2) Exploring the role of knowing team members' expertise in reducing the occurrence of incivility and increasing trust, and (3) Examining the impact of incivility on collective trust. We adopt a longitudinal panel design. Subjects are recruited from the student subject pool of a business school in Singapore. As part of their coursework requirements, each student has to complete a term project in teams of six to eight students. Data was collected via online surveys which were administered at three time points. Knowledge of expertise location was measured at Time One (beginning of the term), incivility was measured at Time Two (middle of the term), and trust was measured at Time Three (end of the term). We employed lagged path analysis to examine our hypotheses. All the path coefficients are significant and in the direction as predicted. Knowledge of expertise location is negatively related to incivility ($b = -.10, p = .02$), and positively related to both cognition-based collective trust ($b = .32, p < .01$) and affect-based collective trust ($b = .44, p < .01$). In turn, incivility is negatively related to both cognition-based collective trust ($b = -.13, p < .01$) and affect-based collective trust ($b = -.08, p = .04$). Expertise, as a critical resource for a

team project, must be effectively coordinated. To achieve this, team members need to have an understanding of the strengths of each team member. In the current research, we propose that team expertise knowledge is effective because it can increase trust and reduce incivility among team members. Thus our study has important managerial implications for team management.

Keywords: *expertise, team management, collective trust, incivility, expertise*

Knowledge, perceptions and use of sport psychology: A survey of Australian Football League (AFL) players

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Research has found that elite athletes generally have positive attitudes towards sport psychology, including a belief that mental skills are important for training and competition success. While sport psychologists are utilised by Australian Football League (AFL) clubs, little is known about AFL players' knowledge, perceptions and use of sport psychology. The aim of the study was to address this gap in the literature by surveying elite-level AFL players in these areas. One-hundred and sixty-one elite-level AFL players took part in the study. Participants completed a 94-item questionnaire covering their knowledge of sport psychology, attitudes towards sport psychology (using the Sport Psychology Attitudes-Revised scale), frequency of use of six techniques (self-talk, imagery, goal setting, relaxation, activation, attention control), and perceived effectiveness of these techniques. Participants responded to items on Likert-type rating scales or with qualitative comments. The survey found the majority of players reported having limited knowledge of sport psychology. Positive attitudes towards sport psychology were found, including: confidence in sport psychology consultation, an interest in learning more about sport psychology, and taking part in mental skills training. Players reported using a range of techniques, albeit infrequently and mainly for competition. Self-talk, imagery, and goal setting were used most frequently, and all six techniques were rated as being at least

somewhat effective. This is the first known study to comprehensively examine AFL players' knowledge, perceptions and use of sport psychology. The findings suggest AFL players have positive perceptions of sport psychology, which is encouraging for the profession. Players' knowledge and use of sport psychology were consistent with levels reported in previous studies with elite athletes. There is a need for practitioners to educate AFL players about the benefits of using mental skills on a more frequent basis. It is hoped the survey findings will encourage further research in this area, and provide practitioners with information that can be used to help AFL players to achieve their potential on and off the field.

Keywords: attitudes, self-talk imagery, goal setting, sports' players potential, mental skills and elite sport

Learning climate and its effects on work outcomes

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In the present study the learning climate in elderly care in an average sized Swedish municipality, before and after an intervention, is investigated. The intervention was part of the programme "Steps for skill" and the basic idea was to build new infrastructures for learning and development in elderly care. In regards to the results of "Steps for skill", taking into account different organizational levels but considering home help services and residential homes as one context, the specific research questions were: Are there differences between the two types of elderly care as well as between managers and employees' in their experience of the learning climate? How do the learning climate and its variables effects work outcomes? What is the outcome of the intervention? Prior to, and one year after, the development intervention surveys were distributed to 29 workplaces and answered by 270 care assistants and 29 managers working in working in elderly care. The sample consisted mainly of females (91%), the average age was 43 years, and 13% had a university degree. Preliminary results show that there is a difference between the two types of elderly care. When it comes to learning climate the groups working in home help services have a

lower estimation than the groups working in residential homes, and a higher level of perceived stress. Regarding the outcome of the intervention, the learning climate only at the home help services became significantly better. To work in home help services seems to have a negative influence on the learning climate, which is not surprising considering the lack of opportunities to discuss everyday work activities and specific problems when they occur. The home help services have specific working conditions that are not in line with the suggested key factors in workplace learning; but that improved after the intervention. Choosing one context over another may influence both research results an implications.

Keywords: elderly care, work learning climate, home help services, residential homes, perceived stress

Leaving two impressions: How do explicit and implicit attitudes form towards a new brand?

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The advertising paradigm is a means by which people form attitudes about a new brand. To investigate the formation of explicit and implicit cognitions when consumers turn toward a new brand, participants were exposed to marketing material of an unfamiliar brand in an unfamiliar product category, in an experimental setting. In Study One, marketing material about a fictional brand of wine was introduced to participants in increasingly elaborate conditions (low, medium and high groups plus a non-exposure control group), to explore the effect of elaboration on explicit and implicit attitudes. Study Two was a replication of Study One, but using a real brand and a website as a source of information. Study Three was similar to Study Two, except that a competing brand was introduced. In Study Four, students were exposed to a supraliminal priming procedure, designed to artificially create associations between the brand and positive valences. All studies used a mixed (between and within-pre/post) experimental design, and identical explicit (thermometer and semantic differential scales) and implicit (Implicit Association Test-based) measures. Study One

showed that exposure to marketing material resulted in a cognitive preference towards the fictional brand in the low, medium and high exposure groups. Favorable affective evaluations were seen only in the medium and high exposure groups. Positive implicit preference toward the brand was not observed. Results of Study Two showed the same pattern. In Study Three, the introduction of an additional, unfamiliar competing brand resulted in favorable cognitive preferences, but no affective or implicit preference toward either product. Study Four showed that creating an artificial association toward a product formed cognitive, affective and implicit preferences toward the primed brand. In conclusion, being exposed to marketing material about a new brand can create positive cognitive attitudes, but positive affective attitudes may require greater elaboration or presentation in isolation. Furthermore, a single exposure does not lead to positive implicit attitudes. In contrast, repeated associations between a brand and positive experiences could be effective in enhancing explicit attitudes through the perception of validation of marketing materials, whereas for implicit attitudes, they could be effective through the strengthening of associations between a brand and positive concepts.

Keywords: *explicit and implicit cognitions, attitudes, marketing, affective evaluations, repeated associations*

Leftward or rightward: Does matching horizontal stimulus movement with habitual reading direction improve evaluations?

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People frequently encounter alphanumeric stimuli that move across the field of vision horizontally. This research examines whether the direction of motion - leftward or rightward - affects processing and evaluations of such stimuli. In particular, it is predicted that when the direction of motion coincides rather than conflicting with the viewer's habitual reading direction (e.g., left-to-right for English speakers), evaluations of the alphanumeric stimulus should be more positive - an effect that is driven by

processing fluency. The sample consisted of 153 students from an English-speaking university who were randomly assigned to two conditions that varied the direction in which a fictitious brand name moved across the computer screen (left-to-right and right-to-left). After watching the moving brand name, participants were asked to report their attitudes toward it, the difficulty with which they were able to process it (processing disfluency—direct measure of fluency), the strength with which they were engaged in the evaluation (strength of engagement—indirect measure of fluency), and the extent with which they felt right (feeling right—indirect measure of fluency). Consistent with our predictions, the brand name moving left-to-right was liked more than the same brand name moving right-to-left ($t=1.99, p<.05$). Mediation analysis (Baron & Kenny 1986) showed that “feeling right” experience drove participants' liking toward left-to-right vs. right-to-left moving brand name (Sobel $z=2.42, p<.05$). In addition, neither processing disfluency nor strength of engagement was correlated with motion direction ($r=-.05, p>.10$; $r=.11, p>.10$ respectively). In sum, our results support that viewers like an alphanumeric stimulus more when the direction of its motion matches rather than mismatches their habitual reading direction, and feeling right experience underlies this effect. Indirect instead of direct measure of fluency being qualified as the mediator may suggest processing fluency drives this effect in a nonconscious manner.

Keywords: *field of vision, motion direction, reading, alphanumeric stimulus, reading direction*

Levels of dual-goal expectancy determine strategies of effort allocation

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As multitasking becomes an everyday-life phenomenon, learning the dynamic processes by which multiple goals are pursued is essential. This is especially true because performance inevitably suffers from competing goals that exceed individual resources. Hence, this study aims at investigating how multiple-goal pursuit may be possible by exploring how effort is allocated to competing goals. Specifically, it

expands Schmidt and Dolis' (2009) theoretical model of dual-goal expectancy to include goal importance. Different levels of dual-goal expectancy enact different regulation strategies, resulting in different effects of perceived progress and goal importance on effort allocation, which correspond to control theory and expectancy theory respectively. This study tests all predictions in a laboratory setting using unobtrusive measures of effort allocation across multiple goals in multiple performance episodes. Sixty university students were required to perform two secretarial tasks on which they were free to allocate time. They were randomly assigned into one of six conditions: two levels of cumulative goal difficulty (high and low); and three types of incentive structure (reward for the first, the second, and both tasks). Participants performed five, six-minute trials, in between which they completed self-report measures including Goal Progress, Goal Expectancies, and Goal Importance. In addition, Effort Allocation and Performance were the two main dependent variables. Effort is operationalised as the amount of time spent on tasks. Performance refers to the degree of task accomplishment. Statistical procedures were employed to test the mechanisms involved in how dual-goal expectancy affects effort allocation and performance. In support of the research hypotheses, preliminary results reveal that cumulative goal-difficulty partly determines dual-goal expectancy, whereas incentive structure determines goal importance. The effects of relative progress and incentives on effort allocation seemingly vary when the level of dual goal expectancy differs. This implies different effort regulation strategies are enacted. In addition, effort allocation predicts performance in a positive direction. Using an unobtrusive measure of effort allocation in a laboratory setting, the study investigates effort allocation involved in competing-goal pursuit. It conceptualises the role of dual-goal expectancy as enacting different self-regulation strategies. Theoretically, this conceptualisation helps shed light on reconciling theoretical propositions.

Keywords: dual-goal expectancy, effort allocation, multitasking, goal importance, performance

Life skills for quality of life at old age: The need for community wellbeing

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Aging is virtually a universal phenomenon. The world community seems to have become increasingly aware of the multifarious issues that surround the life of the old. This concern is attributed to the swelling up of their number in the population inhabiting this globe in recent decades and its consequential demands for health, mental health and care, in the fast changing society, under the influence of modern forces of change. Quality of life (QOL) is a holistic concept. QOL is defined by WHO as an individual's perception of their position in life in the context of culture and values system in which they lie and in relation to their goals, expectations, standards, and concerns (WHO QOL group, 1995). UNICEF used the "life skill" as psychosocial and interpersonal competencies in a person that enable him/her to deal effectively with the demand and challenges in everyday life. The impotence of the 'healthy community' concept has been recognized as an emergent field of research to understand the linkages between human survival, the ecosystem and wellbeing. The concept of wellbeing has been used as the state of being healthy, happy or prosperous. The community wellbeing is an emerging concept that needs exploration through empirical research to understand the indicators of wellbeing and building empathy, understanding, security and psychosocial conformity by living together in a social community. The present study focuses on exploring life skills which enhance quality of life among the old who are living in a small community and leads to community wellbeing and attributions to a positive life. The sample consists of 50 (70 to 80 years old) male and female randomly selected from Aasara old age home (multicultural) in Bhopal M.P. India. A life skill questionnaire was developed and administered to find out the correlation between life skills and quality of life. The two way interaction between gender and age reflected a significant difference in type of life skills and quality of life style. Positive life skills enhance quality of life. The quality of life contributes to community wellbeing.

Keywords: *ageing, quality of life, community wellbeing, life skills*

Links between short-term trajectory of depressive symptoms and effortful control

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Effortful Control, one of temperamental dimensions, is defined as the efficiency of executive attention, including the ability to inhibit a dominant response and/or to activate a subdominant response. Previous studies have reported that Effortful Control was negatively correlated with depressive symptoms. However, little is known about the links between Effortful Control and the various short-term developmental trajectories of depressive symptoms. The main goal of the present study was to examine how Effortful Control contributes to the developmental trajectory courses of depressive symptoms by using a growth mixture modeling (semiparametric group-based approach). Japanese female undergraduate students ($N = 90$, Mean Age = 19.82, $SD = 3.44$) completed the questionnaire booklet including temperamental dimensions and depressive symptom items from Times One to Four at weekly intervals. Short-term developmental trajectories of female undergraduates' depressive symptoms with predictor variable (i.e. Effortful Control) were modeled, and three latent classes were identified by model comparison: a relatively high level group (13.0%), a middle level group (47.6%), and a relatively low level group (39.4%). Additionally, Effortful Control predicted class membership probability fairly consistently. Female undergraduate students with lower Effortful Control tended to exhibit a relatively high trajectory class of depressive symptoms. Although simple correlation analyses only showed that depressive symptoms were negatively correlated with Effortful Control, the results in the present study have additionally showed that depressive symptoms described three different trajectory courses during four weeks, and that Effortful Control could predict the membership probability for these trajectory

courses. These findings may have implications for the effectiveness of identifying female undergraduate students who are at risk for further evaluations, and for the selection of intervention targets and strategies.

Keywords: *effortful control, executive function, depression, temperament, developmental trajectories of depressive symptoms*

Listening to the heart of Indonesian students toward university counseling service

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Young people face many new experiences during their study at the university. These experiences not only challenge students' level of development, but also bring risks of psychological distress. Some universities in Indonesia provide a counseling service in their effort to support students through their academic life. This paper describes a study designed to investigate Indonesian undergraduates' perceptions relevant to a university counseling service. A self-report questionnaire measuring students' perceptions of their university counseling service was distributed to 778 undergraduates from two private universities in urban areas in Indonesia. Results showed that students had poor knowledge of the counseling nature and service details. Students did not show strong favourable perceptions towards the university counseling service. The findings indicated that the publicity work of the universities' counseling service was not adequate in getting across its message to students. In fact, the inadequacy of the publicity of the universities' counseling service was also reported by students. University Counseling Service in Indonesia should disseminate accurate information about counseling nature and service details so that students could have more favorable perceptions towards the service. Detailed findings and further implications of this study will be explored further in the paper.

Keywords: *university counseling service, perceptions*

Lisu literacy, culture and identity

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The Lisu (sometimes called Yobin in India) are a tribal group living in China, Burma/Myanmar, Thailand and India, with a total population of nearly one million. About 2,700 are found in Arunachal Pradesh in the northeast of India. They have a strong group identity, and their language persists well nearly everywhere; but they also have a very positive attitude to second language learning, and many Lisu individuals are successfully bilingual or multilingual and perform well in education systems in all countries. Lisu has a well-designed orthography used in all four countries, mainly by Christian Lisu who represent some 50% of the population; all those in India are Christian. There are various basic materials available for teaching mother tongue literacy, including some specifically prepared by the community in India. Unfortunately, it is not designed for effective transfer to learning any other orthography, though it uses roman upper case letters: 25 upright and 15 inverted. The Lisu orthography is mainly taught in churches and used for reading Christian books. This means that there is little material of intermediate levels of difficulty, between basic readers and the Bible. Nearly all of the published literature is strongly Christian in its content; traditional Lisu oral literature is mostly unknown to Christians, especially those who have been Christian for two or more generations, like most of those in India. We have been printing and circulating various booklets of traditional Lisu oral literature such as the Wedding Song and the New Year Song. Other booklets of traditional stories and proverbs are also planned. Thus, we are co-opting the Christian orthography to maintain traditional culture. This is well received, even by the pastors who might feel that such literature is inappropriate in its content. This may be because of a strong positive group identity, for which Lisu language is a core value, and because it builds on prior cultural knowledge and affirms their identity. The paper will discuss reasons for the relative success of the Lisu in language maintenance and mother tongue literacy, and how this provides a springboard for content learning and second language learning.

Keywords: *Lisu, Yobin, literacy, second language*

LittleCounters™: Instilling number sense in free play

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Early mathematics representations such as numerosity (1 unit or 2 units of something) have been linked to the acquisition of mathematics language, for example, the knowledge of count words such as *one* and *two* (e.g., Jeong & Levine, 2005; LeFevre, Clarke, & Stringer, 2002). The aim of this study is to evaluate the effectiveness of an early numeracy program, LittleCounters™ (Kotsopoulos & Lee, 2009) to increase the amount of mathematical talk used by parents during play with children between 12 and 28 months old. The adult input of families (7 boys, 8 girls) that have participated in the 5-session LittleCounters™ program was compared to that of families (14 boys, 16 girls) that did not. The parent-child dyads engaged in a 30-minute naturalistic free play session in their home using a standard set of toys (e.g., five balls, eight car counters, ten animal counters, twelve Lego blocks) which could be used and labeled in a number of ways as well as two pop-up books on colors, numbers and shapes provided. The adult speech was transcribed and coded for mathematical input such as quantity words (how many, less than), cardinality (asking for the number of items in a set without counting), counting words (one, two), counting objects in an array or in sets, and ordering numbers. The proportion of mathematical input uttered in the free play session by families which were not in the LittleCounters™ program was two per cent in terms of the total number of words spoken. In contrast, the proportion of mathematical talk by families that participated in the LittleCounters™ program was 8.5 per cent. With socio-economic status (SES) and age as covariates, our preliminary multivariate ANCOVA revealed that the differences in terms of the total frequency of mathematical talk between the two groups were significant at the .05 level. Our findings suggest that parents can be taught to incorporate early mathematical language and instructional techniques effectively into their children's play time through the use of songs, games, stories, and movements in the LittleCounters™ program. This research is poised to make interesting

contributions in understanding the acquisition of number sense by young children.

Keywords: *number sense, mathematics, early numeracy program*

Locus of control and inhibited sales prospecting in a large multi-national sample

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This study examines causal attributions and the expectation of sales success across nations. We hypothesised that salespeople expecting outcomes to reflect their own actions are more resilient when prospecting, but that the influence of causal attribution may vary across countries. Participants (194 366) from eight nations participated in the study. Each participant completed a limited purpose diagnostic questionnaire designed to assess clientele-building (sales prospecting) activity. An inventory of factors reported to influence sales success were included. Two of the factors consisted of endogenous attributions. Four were exogenous. A 2x2x8 factorial ANOVA was completed to examine the effect of locus of control on clientele-building and whether gender or country of residence moderated the effect. A frequency analysis found that a significant component of the sample selected endogenous factors as being most important for sales success, but the number of participants endorsing endogenous over exogenous factors varied across countries. The factorial analyses also indicated that participants selecting endogenous success factors were significantly less likely to be reticent to make sales calls. However, this result was also significantly moderated by country of residence. This study clarifies the importance of endogenous attribution in a large multinational sample of sales professionals. It also underscores the influence of locus of control on core customer-building competencies such as prospecting. Participants endorsing external factors as most important to sales success also reported significantly higher levels of sales call reluctance. These results are consistent with earlier research which reported that perceptions of

uncontrollable outcomes tend to be associated with higher levels of anxiety and heightened inhibition.

Keywords: *locus of control, sales prospecting, causal attribution, clientele-building, salespeople*

Locus of control beliefs mediate the relationship between religious functioning and psychological health

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The present study investigated the correlational relationships and pathways of mediation between health, religious functioning and locus of control (LOC) in order to explain the well-established link between religiosity and health. The sample consisted of 122 Christians (79 female, 43 male) who were predominately Catholic, ranging in age from 18 to 80 ($M = 45.47$, $SD = 15.0$). Participants were recruited from churches in Melbourne, Australia, and completed a questionnaire package measuring (1) psychological and physical health, (2) the religious variables of awareness of God, instability and impression management and, (3) God, internal and external LOC domains. Awareness of God and internal LOC were associated with better health, whereas external LOC and instability were associated with poorer health. God LOC and impression management were not significantly associated with health. Sobel tests were used to analyse mediation hypotheses. Internal LOC was found to mediate the relationship between awareness of God and better psychological health, and external LOC was found to mediate the relationship between instability and poorer psychological health. The results provide empirically robust explanations for both the positive and negative influences of religiosity on mental health. Such insights provide opportunities for future research and may be useful to counsellors.

Keywords: *locus of control, religiosity, religious functioning, impression management, psychological health*

Loneliness and personal growth: The mediation role of self-reflection

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Loneliness is recognized as a socially prevalent phenomenon that has been described consistently as very painful, distressing, and disturbing. However, several researchers found that there are surprising positive outcomes of loneliness like many other stressful and traumatic life events. Therefore the current study examined self-reflection as a mediator between loneliness and personal growth. A total of 150 undergraduates participated in the study and were asked to complete questionnaires including UCLA Loneliness Scale (Version 3), the Self-Reflection and Insight Scale (SRIS) and Ryff Scales of Psychological Well-Being (PWB). Self-reflection was positively correlated with personal growth and loneliness was significantly negatively correlated with personal growth and self-reflection. The significant relationship between loneliness and personal growth was significantly reduced in magnitude when self-reflection was included in the model. The prediction that loneliness was significantly and positively linked to personal growth and self-reflection in college students was not confirmed in the current study. Results from regression analysis indicated that self-reflection partially mediated the relationship between loneliness and personal growth.

Keywords: *loneliness, self-reflection, personal growth*

Loneliness, family interactions, and general mental health in the elderly

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The aim of this research was to study loneliness and its relationship with family interactions and general mental health in Indian rural and urban geriatric population. A sample of 38 rural and 42 urban males in the age range of 65 to 85 years (mean age: rural 68 years, urban 70 years) were assessed using the Perceived Loneliness Scale (Jha, 1997), Family Interaction Pattern Scale (Bhatti, Subbakrishna, Ageria, 1986), and the General Health Questionnaire (GHQ) (Goldberg, Williams, 1988), after a brief rapport forming

session. The scores were rendered to statistical analysis using t-test and correlation evaluations. The rural geriatric males were significantly lonelier than their urban counterparts; and their scores on GHQ were also significantly higher indicating poorer general mental health. The latter was true across all the subscales, namely, somatic symptoms, anxiety and insomnia, social dysfunction, and depression. The family interactions were comparable in the two groups, except for leadership pattern wherein the rural sample exhibited higher scores. In the rural sample loneliness was significantly correlated with all the measures of mental health and with family interaction patterns on the whole, with specific emphasis on reinforcement styles and cohesion in the family. Mental health was correlated with social support in the family. The urban elderly too showed loneliness related to general mental health, but specifically with anxiety and insomnia; and with the role division and leadership patterns in the family. Somatic complaints and depression were related to family interaction patterns especially to reinforcement styles. Old age is a stage when generativity-integrity must prevail as the individual self-actualizes. However when loneliness sets in there is despair and dissatisfaction; and a predisposition to mental disorders. Family plays a vital role at this developmental stage especially in collective cultures like India. The paper highlights the dimensions of family interactions determining the wellbeing of the elderly, and the role of loneliness in mental health of the elderly. The implications for counseling are discussed.

Keywords: *loneliness, family interactions, elderly people, general health questionnaire, well-being*

Long-term training effects of a psycho-rehabilitation technique for the children with disabilities: A cross-cultural study

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The aim of this research was to measure the long-term psycho-rehabilitation method Dousahou on the social interaction, behavior control, health maintenance, emotion expression, initiation, speech and communication, and volunteer body movements of children with

mental retardation, Cerebral Palsy, and Autism. The Questionnaire for Developmental Changes was administered among trainers and parents of these children on the fifth camp day of psycho-rehabilitation training. The psycho-rehabilitation method did support and promote health maintenance most, emotion expression least, and the usual on initiative and appearance, volunteer body movements, speech and communication, behavior control, and social interaction factors. In conclusion, the psycho-rehabilitation method was found to effectively promote health maintenance most, emotion expression least, and the usual on initiative and appearance, volunteer body movements, speech and communication, behavior control, and social interaction factors, if they regularly practice of Dousa-hou training and participate on average 3.6 times per week in camps in the Indian and Korean context.

Keywords: *children with mental retardation, autism, cerebral palsy, psycho-rehabilitation model, health maintenance*

Losing face and emotions: The effects of related factors in a social comparison context

HAN, K. H. (Tamkang University)

It is apparent that losing face causes distress. However, if we ask what feelings underlie losing face, the answer seems to remain unknown. In addition, face is a kind of social-contingent self-esteem. One could experience losing face and different emotions due to different factors related to that specific context. This study focused on the effects of perception (implicit versus explicit) and if there was a family member in a social comparison context. Using scenario experimental method, this study manipulated perception (implicit versus explicit) and whether the target person's mother was (versus not) in that social comparison context. The results showed that if the message of "I'm not as good as others" was perceived implicitly by oneself, the emotions one experienced were mainly depression and shame. On the contrary, if the message was discussed explicitly by others, the emotions were anger, shame and humiliation. In addition, if the target person's mother was in the context, besides depression and shame, one

would also have a feeling of guilt when perceiving the comparison implicitly. However, if one's bad performance was discussed explicitly in front of his mother, one would experience strong feelings of anger, hostility, humiliation as well as shame and embarrassment, but not guilt. Overall, the results were consistent with the cognitive perspective of self blame versus other blame. When one's bad performance was perceived implicitly, the emotions mainly belonged to the self-blame category. Whereas, when one's bad performance was discussed openly, besides self-blame emotions, one also experienced other-blame emotions. In general, the appearance of a family member could strengthen the emotions one experienced in that context.

Keywords: *shame, self-esteem, losing face, self-blame versus other-blame, perceptions*

Masculinity and alcohol use among young men in Sarawak: Preliminary findings

AMIT, N. (Monash University)

The objectives of this research in progress are firstly, to examine alcohol use among young men in Sarawak and secondly, to examine how they negotiate masculinity and its association with alcohol use. In this qualitative research, in-depth semi-structured interviews were conducted among 20 young men (aged between 18-30 years) from different ethnic groups in Kuching and Samarahan Divisions, Sarawak. Themes associated with masculinity and association between masculinity and alcohol use were analyzed based on grounded theory approach. The results will be discussed in two sections. Firstly, patterns of alcohol use among young adults from different ethnic groups. Secondly, themes related to young men's negotiation of masculinity will be discussed. Some of the masculine themes are being independent, hardworking, responsible, and supportive; securing a working status; and following one's cultural tradition. This discussion also includes association and disassociation with masculinity and alcohol use and elements of masculinity in alcohol use as experienced by them. Some elements of masculinity in alcohol use are usage of masculine-related images in persuading and

challenging alcohol use among peers, masculine images as portrayed by alcohol use, and role of alcohol use in facilitating interaction between men and women. Nature and extent of alcohol use among participants from different ethnic groups and their conception of masculinity were associated with their social and cultural context. The limitations and direction of future research will also be discussed.

Keywords: *young men, masculinity, alcohol use*

Mastery motivation in toddlers: Characteristics and effects of behavior evaluation

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The aim of this research was to examine not only the general characteristics of mastery motivation in toddlers, but also the effects of behavior evaluation on it. The method of situational experimenting was used to test 71 toddlers with three game tasks, including exploration-feedback, problem-solving, and challenge-preference, respectively. To measure effects of behavior evaluation, positive evaluation by tester and test absent conditions were set for all tasks. Also, toy with visual and auditory feedback and without feedback conditions were also set for the first task to examine characteristics of mastery motivation as a function of mastery object. The material used for first task was a newfangled toy car, and it could give out various visual and auditory feedbacks, when participants controlled it. The material for the second task was a shape matching board with different shapes of wooden fish put into it, and for the third task, were jigsaw puzzles of two levels, namely, easy and difficult. On first task: (1) the average time toddlers payed attention to the newfangled toy was over 7.5 minutes with enjoyable emotion; (2) there were more mastery behaviors in toddlers on toy feedback condition than without feedback; (3) more pleasure were derived by toddlers from a tester's positive evaluation than without evaluation. On the second task: (1) toddlers were happier when they succeeded rather than failed; (2) whether success or failure occurred, toddlers' emotions were better when

the tester gave a positive evaluation than without evaluation. On last task: 94.4% of all toddlers would carry out the difficult task and had high persistence on it, but significant individual differences existed. Toddlers' mastery motivation for a newfangled object with visual and auditory feedbacks was strong. And they came to experience different emotions from success and failure in mastery behavior. Positive behavior evaluation by adults could bring toddlers' greater pleasure regarding on mastery. All of the above provide additional information to teachers and parents to promote toddlers' mastery and emotions.

Keywords: *mastery behaviour in toddlers, matery motivation, exploration feedback, positive behaviour evaluation, problem-solving*

Materialism: Friend or foe? The link between materialism, subjective-well being and friendship

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The aim was to investigate to what extent social support affects the relationship between materialism and subjective well being (SWB) in the United Kingdom (UK). The relationship between materialism and SWB has been found to be intricate. Researchers have found there to be either a positive (Sherman & Newman, 1978; Diener et al., 1985) or negative (Belk, 1984; Kasser & Ryan, 1993) relationship between the two. However, this has never previously been explored in the UK. New sets of scales that measure social support, SWB and materialism were developed. The scales were used to look at whether there is a positive or negative relationship between materialism and SWB in the UK, and if social support affects the relationship between materialism and SWB. The scales were merged on to one questionnaire that 173 participants filled in and completed. The results showed that there were significant negative correlations between materialism and SWB, and between materialism and social support. A multiple regression also found that when controlling for social support the influence of materialism upon SWB was reduced in strength. From the results it can be concluded

that materialists tend to feel less good about themselves. However, the decrease in SWB is also affected by the lack of social support. With a better social network, materialists are less likely to report lower levels of SWB. This supports previously conducted studies in other countries.

Keywords: *materialism, social support, subjective well-being*

Maternal power assertion: Its role in social information processing and externalizing behavior in Turkish preschoolers

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Izzet Baysal University)

The goal of the study was to investigate the relations between maternal power-assertive disciplinary techniques (both physical and non-physical forms of maternal punishment), social information processing patterns (hostile attribution bias and aggressive response selection), and externalizing behaviors in Turkish preschool children. One hundred and fifty-eight four year-old children attending different preschools in two cities of Turkey, their mothers and preschool teachers, participated in the study. They were followed throughout three years. At Time One (four years-old), maternal power-assertive child rearing was measured with self-reports (Child Rearing Questionnaire) and children's social information processing skills were assessed via behavioral assessments (the Social Perception Task). At Time Two and Time Three (five and six years-olds), teacher ratings were utilized to measure children's externalizing behaviors (Eyberg Child Behavior Inventory and Child Behavior Checklist). Children's responses to the Social Perception Task were transcribed and coded into categories. All measures displayed high internal consistencies. Data were examined through correlations and hierarchical multiple regression analyses. Findings of the study revealed that maternal physical and non-physical forms of punishment had varying effects on children's social information processing skills and externalizing behaviors. Results were mostly in line with previous studies conducted with

Western samples. The present study provides the first evidence from on the effects of maternal power-assertive discipline on Turkish children's cognitive and behavioral development. Findings of the study are discussed with regard to Crick and Dodge's (1994) social adjustment and social information processing model.

Keywords: *sociocognitive development, maternal power-assertive disciplinary techniques, child rearing questionnaire, social perception, social information processing*

Meaningful being in Australia: The experiences of young Sudanese-Australians

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The aim of this paper is to provide an overview of PhD research being carried out with the Sudanese Diaspora in Australia. The project was interested in exploring the experience of meaningful being from the individual's perspective while taking into account historical, social, political and cultural contextual factors. The study was hypothesis-generating. Semi-structured interviews were conducted with 30 Sudanese-Australians aged 18 to 30. A non-random, snowballing, stratified technique was utilised, with assistance from gatekeepers. Eight participants were re-interviewed two years after the first interviews were conducted. A template analysis was carried out, followed by an interpretative phenomenological analysis on a sub-set of the interviews. While the study was focused on qualitative data, some quantitative information was also collected enabling a comparison of the different types of data. Participants reported a broad range of internal and external characteristics in contributing to the life being experienced as meaningful in Australia. Education and family were reported as the dominant sources of meaning in life. Personal beliefs (including cultural and religious beliefs) were also important. Peace at an individual, relationship (e.g., family and community), and societal level (e.g., peace in Sudan and Australia) were also key themes. Threats to the experience of life as meaningful were identified, including separation from

family, difficulties overcoming gaps in education, conflict with teachers and between family members, encounters with discrimination, and isolation from members of the broader Australian community. The fulfilment of basic needs, personal strengths and struggles, the immediate social world, beliefs and values, and systems and structures all play a prominent role in the lives of young Sudanese-Australians. The results suggest that many young Sudanese-Australians maintain strong links to Sudan, both on a practical level through sending remittances to family remaining in Africa and on a symbolic level through the experience of identity. Future research and project work adopting a participatory approach could explore concepts of peace held by Sudanese-Australians, including the role of the Diaspora in the peace-building process in Sudan. Further, there is also potential for a participatory peace-building project with young Sudanese-Australians, where attention is given to peace-building within and by Diaspora communities.

Keywords: *Sudanese-Australians, meaningful being, Sudan, peace-building*

Measuring performance: Introducing a hand held psychometric testing device

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RUTHENBECK, G. (Flinders University)

The aim of this research is to develop a small, robust, portable device to allow psychometric testing in a normal environment, away from the laboratory. The method involves a Nokia mobile phone being programmed to allow the user to perform six standard psychomotor tests. All results are time and date specific and all data – reaction times, number of errors etc., are stored electronically in the phone's memory. This is directly downloadable to an Excel spreadsheet. The tests are: Symbol Digit Substitution, Simple and Choice Reaction Times, Reaction time with one decision-making step, Number Recall and Finger Tapping Test. The units have undergone extensive trials and have been used in a busy hospital to study ability to function before and after day surgery. No problems have been encountered. The phones have survived much abuse including "drop tests". It has been easy to measure psychomotor performance using

sophisticated tests such as Symbol Digit Substitution, Decision Making Reaction Times and error rates in an everyday environment. Multiple measurements can be made throughout the day without inconveniencing the patient. In conclusion, having an objective assessment of performance is very useful. Being able to make these assessments in the workplace or in the home is especially so. This is a useful tool in many areas of psychological and medical research. The authors are pleased to share the technology with co-workers.

Keywords: *psychomotor tests, performance appraisal, mobile phones, medical research, reaction time*

Measuring subjective workload using the NASA-TLX: A qualitative analysis of sub-scale interpretation

HOPLEY, L. (Defence Science & Technology Organisation), CHADUNOW, C. (Defence Science & Technology Organisation)

An operator's perception of workload is considered a central concept within the field of human factors and ergonomics. One of the most widely-used, self-report measures of workload is the NASA-Task Load Index (TLX) (Hart & Staveland, 1988). The NASA-TLX consists of six subscales (Mental Demand, Physical Demand, Temporal Demand, Frustration, Effort, and Performance), the combination of which is assumed to provide a generic measure of overall workload. Over 20 years since its original development in the aviation field, the NASA-TLX has been favoured in a variety of research contexts for its simplistic administration and ease of interpretation by respondents. Its adaptation to vastly different fields of investigation has resulted in modifications to the original subscale descriptions, and in some circumstances, the subscales themselves. However, the process of modification of the NASA-TLX to better suit specific domains has not been well documented within the literature. The aim of this presentation is to discuss a methodology for adapting the NASA-TLX to specific research domains, using vehicle evaluation as a case study. Findings from an exercise conducted with drivers of military land vehicles will be presented, which investigated

the range of workload definitions elicited from this unique sample group. A total of 42 drivers provided descriptions of what a rating of 'very low' or 'very high' would mean to them within each of the six workload subscales. The qualitative data were analysed with NVivo to identify consistent themes. The analysis revealed definitions consistent with the original NASA-TLX scale descriptors. However, themes relevant to the military driving domain were also identified within each subscale. These included driving conditions, vehicle comfort, elements of teamwork and level of vehicle autonomy. Eliciting definitions of the NASA-TLX subscales from a specific group is suggested as an initial step within a methodology for scale modification. Further testing is required to ensure that any changes enhance the utility of the original scale within research.

Keywords: *subjective workload, operator's perception*

Medical observation chart design affects users' decision accuracy and response time regarding patients' vital signs

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Paper-based medical observation charts are the principal means of recording and monitoring changes to hospital patients' physiological data or vital signs (e.g., blood pressure, respiratory rate, heart rate). There is considerable variation in the design of observation charts in current use, and a lack of empirical research on the performance of observation charts in general. Improving the design of observation charts may improve the early recognition of patients who are deteriorating. This study aimed to evaluate how accurately trained novices could detect patient deterioration on 6 different observation chart designs in use or in development in Australia. Six chart designs were included in the study. In a previous study, a heuristic analysis had classified one of the charts as being poorly designed, one of the charts as being of average design, and two charts as being relatively well-designed. We also designed two further charts

with reference to human factors principles of "user-friendly" design (e.g., using coloured bands to indicate physiological thresholds). Participants were shown 48 observation charts in a randomised order. Each chart design was shown four times displaying physiological data with at least one abnormal vital sign (e.g., an abnormally high blood pressure), and four times displaying normal physiological data. Participants had to classify the physiological data on the charts as "normal" or "abnormal" as quickly as they could. Decision accuracy and response time were the dependent variables. Initial results showed that chart design had a significant effect on decision accuracy and response time (both $p < .001$). For both measures, participants performed significantly worse on the "poor", "average" and one of the "well-designed" charts compared with the newly designed "user-friendly" charts (all $p < .05$). Differences in the design of observation charts can affect chart users' decisions regarding patients' vital signs and the time it takes to make such decisions. Therefore, it is recommended that charts that are not well-designed be discarded in favour of those that can empirically demonstrate their effective design. Improving the standard of observation charts in use in hospitals may improve the recognition of deteriorating patients.

Keywords: *medical observation charts, chart design, patient deterioration*

Mental effort ratio: Assessing individual differences in subjective fatigue tolerance

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The series of studies reported here were aimed at developing and validating a method of estimating individual differences in subjective tolerance to fatigue and physical exhaustion. Since Borg's (1970) invention of the Ratings of Perceived Exertion (RPE), both effort perception (in short-term work) and perceived fatigue (in long-term work) have been considered as key factors influencing physical performance and its resourcing (cognitive and metabolic). The

concept of mental effort tolerance (MET; Dornic, Ekehammar & Laakasonen, 1991) has been instrumental in generating cognitive explanations for the effects of effort perception. Generally defined, MET represents the extent to which the individual is able to tolerate subjective discomfort when persisting in a difficult task (Dornic, Ekehammar & Laakasonen, 1991). Following Borg's (1973, 1982) discovery of exercisers' ability to detect first signs of perceived exertion, the proportion of exercise time after this detection has been found to be relatively stable (Ilyin, 1980; Aidman 1995) and individually distinct. This proportion was termed "mental effort ratio" (MER) and a psychometric procedure for its measurement has been developed using a modified hypoxemic (breath-holding) test. The paper will review a series of studies with elite endurance athletes (Aidman, 1995, 2005; Miotti, 1996) and military personnel (Aidman & Crameri, 2006) that examined the relationship between MER, endurance performance and health costs associated with it. Results to date confirm the validity of MER measurement in predicting important performance parameters, such as aerobic capacity, at the high end of fitness range. It is also useful in estimating health risks of endurance training, such as metabolic inefficiency, overtraining and burnout. This makes it an attractive practical addition to assessment protocols used for selection into physically demanding occupations. Potential applications and future development of the tool will be discussed.

Keywords: *perceived exertion, mental effort tolerance, effort, subjective discomfort, physical demands*

Mental health, image of God, and quality of attachment in college students

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The aim of the current research was to investigate the relationship between mental health, image of God and quality of attachment in students of Medical Sciences universities. To accomplish the stated goal, 513 students from Tehran Medical Sciences University and Iran Medical Sciences University were selected by

means of proportional stratified sampling. Adult Attachment Scale (Collins, 1996), God Image Inventory (Lawrence, 1997) and Symptom Check List 90-Revised (Derogotis, 1973) were administered to them. A Multiple Regression Analysis was used to analyze the data. Results indicated that students' mental health could be predicted from their scores on quality of adult attachment and their type of image of God. This showed that students with anxious attachment were lower in general mental health status as measured by the Global Severity Index (GSI) score in the Symptom Check List 90-Revised. However, students with a higher score on dependence dimension of adult attachment were higher in mental health. This indicated that dependability and trustworthiness of attachment figure is associated with mental health. In addition, students who saw God as "accepting" were higher in general mental health status as estimated by GSI in Symptom Check List 90-Revised. Moreover, analysis revealed that married students were healthier than singles. However, no differences were found between male and female students regarding their mental health status. Investigators concluded that a significant relationship existed between quality of adult attachment, images of God and mental health of college students, and mental health can be predicted from the quality of attachment and type of image of God.

Keywords: *image of God, quality of attachment, Adult Attachment Scale, Global Severity Index, Symptom Checklist 90-Revised*

Mini-markers in China: An empirical study for the use of mini-markers of the 'Big-Five'

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Saucier's 'Mini-Markers' are widely used in the 'Big-Five' measurement of personality, including in the Chinese version. However, no one has before examined the validation of the Chinese version. This article examines the criterion validation of the Chinese-translated version of Saucier's Mini-Markers personality questionnaire. Participants were 492 students in a Human Resources class, who were mostly

white-collar workers. Their personality and several workplace criteria including justice, locus of control, and turnover intention, were measured. The Chinese-translated version of Mini-Markers was used as the Big-Five measurement. The correlations between participants' Big-Five traits and the workplace criteria were calculated. The original personality scores were transformed into standard Z scores, and the correlation calculated using both of them. Many criteria were found to have good correlations with Mini-Markers scores including procedural justice with conscientiousness, self-valued performance with agreeableness, conscientiousness with emotional stability, and job satisfaction with conscientiousness, agreeableness, and openness to experience. The validity and reliability of Saucier's Mini-Markers has been shown to be strong. As an abbreviated version of the Big-Five measurement, 'Mini-Markers' saves time for researchers and practitioners, and the English version has been widely used. This article shows that the Chinese version is also reliable and valid and can be used as a convenient tool in the workplace.

Keywords: *personality, big five model of personality, mini-markers, Chinese, saucier*

Modification of measures on the effect of long distance work assignment on the personal, family and work domain to fit into Muslims' cultural contexts in Indonesia

ZULAIFAH, E. (Leipzig University)

The aim of this study is to develop models of explanation on the phenomena of family structure disruption as a result of job demand. The results of the study are expected to be beneficial for developing a more family friendly policy regarding work assignment. The study is focused on finding a predictive relationship among variables in different domains: individual, family and work. In the first stage, this study tests some already developed measures, to see how they fit into the Indonesian cultural context. The study used a survey method for families. A total of 94 families in and around a city in south central Java were included in this preliminary study. The measures involved in this study are subjective well being, gratitude, acceptance,

family climate, and work stress. The result of this study showed that the already developed measures widely used in other studies in western cultures have low internal consistencies when applied within the Javanese-Indonesian culture (more detailed results will be shown in the presentation). There is a need to adjust the developed measures to better suit the cultural context of the study population. Measurement of Subjective Well Being (SWB), Gratitude, Acceptance, Family Climate and Work Stress will need to be modified to show better cultural sensitivity. The modification may involve changing the construct to include more culturally relevant factors. It may also be done by still using the same factors but replacing the items to better represent the reality within the specific culture.

Keywords: *family structure, family disruption, work assignment, cultural factors, work stress*

Mood and false memories for end-of-life treatment decisions

SHARMAN, S. (Deakin University)

When people prepare medical "Advance Directives" to say which life-sustaining treatments they do or do not want, they later change their minds about many treatments—but do not realise it. Instead, they falsely remember that their old directive reflects their current preferences. The current experiment investigated the effects of people's mood on their decisions about medical treatments and on their false memories for their previous decisions. Participants took part in two sessions. At Time One, they were experimentally induced into positive or negative moods. Participants then decided which life-sustaining treatments they would want if they were seriously ill, such as tube feeding if in a coma. Four weeks later, at Time Two, participants made these decisions a second time. After making their second round of decisions, they were asked—in a surprise test—to recall their previous decisions. Participants changed their minds about 16% of their decisions; for example, saying that the first time they did not want life-sustaining treatment and saying that the second time they did. As predicted, people in negative moods at Time

Two changed more of their decisions (24%) than those in positive moods (10%). When participants changed their minds, they failed to realise that they had done so for almost a third of their decisions. Overall, participants falsely remembered that 31% of their previous decisions were the same as their current decisions. Participants in negative moods at Time Two falsely remembered more of their decisions (36%) than those in positive moods (27%). These findings suggest that people's current moods influence whether they change their treatment decisions; current decisions in turn bias recall of past decisions. Those directly involved with end-of-life care, such as policymakers, physicians, nurses, and chaplains should be informed that people often change their minds about past treatments without realising and that these changes are more likely to occur when people are in negative moods. Steps may then be taken to encourage patients' accurate recall of their previous decisions—perhaps through eliciting more positive moods—as they consider whether or not they actually want to change their minds.

Keywords: *end-of-life care, advance directives, life-sustaining treatment choice, treatment decisions, false memory of decisions*

Moral reasoning in clinical practice and medical education in the Pontificia Universidad Javeriana (Bogotá, Colombia) Category “Altruism and dignity, beneficence, confidentiality and duty-of-care”

DIAZ-AMADO, E. (Universidad Javeriana), MELO, H. E. (Xaverian University), CELY, L. C. (Xaverian University), OBANDO, F. S. (Xaverian University), GUEVERA, C. L. (Xaverian University)

This research aimed to characterize the moral reasoning of medical students at the Xaverian University, Bogotá, Colombia. We analyzed the relation between five moral categories/domains (*altruism, contract-confidence-justice in the exchange, consciousness, decentering of self-interest and role adoption*) and four relevant bioethical categories (*dignity, beneficence, confidentiality and duty of care*). In this presentation the relationship between *altruism* and the aforementioned bioethical categories is

examined. In total, 484 students participated, coming from each semester between first and tenth (please note, the medicine academic program is divided into twelve semesters and the eleventh and twelfth correspond to a year of internship). Students from seventh and eighth semesters constituted the intentional, non-probabilistic sample to test the validity and confidence of the instrument. Significant differences were found in four out of the five variables studied, with a significance level of .05. We observed that moral reasoning had a non-linear progression pattern; it depicts particular routes and several itineraries. Moreover, we noticed that different clinical situations entailed dissimilar moral reasoning which did not follow those ideals usually offered by static theories.

Keywords: *moral reasoning, medical students, altruism, role adoption, duty of care*

Motivation and rationality of robbers: The application of Apter's reversal theory in street crime analysis

PIOTROWSKI, P. (Jagiellonian University)

This article deals with the issues of motivation and rationality of agents of street robbery. Most robberies are triggered by impulsive juveniles who have no intention of committing a crime or engaging in a thorough analysis of its gains or risks (de Haan & Vos, 2003). As the reversal theory supplies explanation to irrational and paradoxical behaviour (Apter, 2001), an attempt has been made to apply this theory in the analysis of crime. The author conducted semi-structured interviews with 107 agents of street robberies (of whom 55 were underage and 52 were of age). The results allowed us to define a three-type typology of street robbers: “the rational” ones, those of “bounded rationality”, and “the irrational” ones. The street robbers in the first group act purposefully and systematically. The second group - the so-called “bounded rationality” street robbers - act under the influence of alcohol or drugs, or are affected by debilitating factors, such as group pressure, and various aspects ensuing from the participation in “street culture”. The third group (encompassing about 30% of the total of subjects) is that of irrational street robbers, who

committed crime without any forethought, with no motive of a material gain and with no prior calculation of profit or risk. Their motives are unclear to external observers inasmuch as they are obscure to the robbers themselves. Apter's reversal theory was adapted to the analysis of their behaviour. In the perspective of this theory, it transpires that a process of decision-making relating to the act of robbery should not be described solely within cognitive categories but extend to include paratelic dominance and the relation with felt arousal – hedonic tone. Numerous cases of "irrational robbery" go along one of two patterns: maintenance of a high level of arousal in a paratelic state or a meta-motivational state reversal that entails aggressive behaviour. The analysis of street robbery in the light of a three-type typology gives rise to significant implications, both theoretical and practical. Essentially, it affects the understanding of criminal motivation, and creates new perspectives for effective correction, which focuses on the roots of crime.

Keywords: rationality of street robbery, criminal motivation, juvenile offending, hedonic tone, risk decision-making

Motivational interviewing with cognitive-behaviour therapy for anxiety and depression following traumatic brain injury

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There is strong evidence that Traumatic Brain Injury (TBI) leads to psychiatric disorders, most commonly anxiety and depression, which increase in frequency over time and are associated with poorer functional outcomes. This study aims to develop and evaluate in a randomised controlled trial, a Cognitive Behaviour Therapy (CBT)-based anxiety and depression treatment program adapted for a community sample with moderate-severe TBI. It also aims to evaluate the application of Motivational Interviewing (MI) as preparatory intervention, focusing on increasing motivation

to change and engagement in treatment. Participants (aged 18 years and over) with moderate to severe TBI are being randomly assigned to one of three treatment conditions to evaluate the relative effectiveness of: (1) Up to three sessions of MI followed by CBT (MI+CBT) as compared with (2) CBT only and (3) treatment as usual (Control). Assessment includes a structured clinical interview to determine psychiatric diagnoses; self-report measures of anxiety, depression, psychosocial functioning and coping style; and measures of memory, executive functions and premorbid intellectual functioning. Both interventions (CBT and MI) are guided by manuals adapted for participants with TBI, with an emphasis on flexibility to tailor therapy to individual clients' needs and cognitive difficulties. The study is in progress. Preliminary outcome data suggest positive treatment response in participants who received MI + CBT or CBT only. Observations from individual case studies indicate a high comorbidity of depression and anxiety in this sample, and highlight the challenges in assessing and treating psychiatric disorders following TBI. Feedback from participants highlights the importance of therapeutic alliance in treatment engagement. The study results will inform clinical practice by providing evidence about relative effectiveness of interventions for individuals with TBI who suffer from anxiety/depression. Given the strong association between psychiatric disorders and functional outcome, effective psychological treatments are required to provide a means of enhancing psychosocial outcomes for this group.

Keywords: brain injury, depression, anxiety, motivational interviewing, cognitive behavioural therapy

Motor performance in autism and Asperger's disorder: Is there a relationship between motor dysfunction and communication disturbance?

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The aim of this study was to identify the neuromotor profile of children diagnosed with autism and Asperger's Disorder and to examine the relationship between motor difficulties and emotional behavioural disturbance, severity of autistic symptoms and communication disturbance in children with Pervasive Developmental Disorders. The Movement Assessment Battery for Children (MABC) was administered as a measure of motor proficiency, and the Developmental Behavioural Checklist (DBC) as a measure of emotional behavioural disturbance in the following groups: Asperger's disorder (AD) ($n = 22$, mean age = 9.9 years, $SD = 1.6$); High functioning autism (HFA) ($n = 23$, mean age = 9.4 yrs, $SD = 2.7$); Low functioning autism (LFA) ($n = 8$, mean age = 9.8yrs, $SD = 1.7$) and typically developing children (TD) ($n = 20$, mean age = 9.9yrs, $SD = 1.5$). Results indicated qualitative and quantitative impairments when comparing the HFA to the AD group. The HFA group performed worse on cerebellar motor items such as ball skills and balance compared to the AD group. As predicted the LFA group was also shown to be quantitatively more impaired than the HFA group. Motor symptoms, in particular cerebellar symptoms, were shown to be associated with emotional/behavioural disturbance, autistic symptoms and communication disturbance. Results confirm previous findings implicating the cerebellum as a likely source of motor dysfunction in children with autism and may also help to distinguish AD from autism.

Keywords: Autism, Asperger's syndrome, Movement assessment battery for children, Developmental Behavioural Checklist, Cerebellar motor items

Multidimensional relationships between prosodic features of speech sound and personality impressions

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This study suggests a model to explain the relationship between prosodic features and speaker's personality impressions. This kind of model is important because it would explain the mechanism to formulate personal impressions in

verbal communications. In application, the model could help speakers to control their personality impressions in their speech, and artificial voices to be synthesized with desired and distinct personality impressions. The speech stimuli were synthesized from the original speech sound using STRAIGHT algorithm. Prosodic features such as speech rate, pauses, and intonation-contours were systematically manipulated to synthesize the continua of speech stimuli for each prosodic feature. This study consists of three experiments corresponding to three prosodic features. In each experiment, 100 to 200 participants were asked to rate their impressions on randomly presented stimuli from the continua for the experiment using Big Five personality traits. Changes of each personality trait for each prosodic feature were analyzed to construct a model. The results indicated that each trait had a distinctive change pattern, while reversed U-shape patterns were their common characteristics. In other words, each personality trait could be estimated with a quadratic regression equation. In these equations, use of sensory scales, which were converted from physical scales, lead more accurate estimates. For example, intonation-contour showed clearer U-shape in approximate equations with a sensory-scale (Mel-Scale) than with physical scale (Hz). Further, by integrating these five equations, the whole personality impression could be reconstructed. Because this set of the experiments utilized a sensory scale rather than physical scales, each personality trait could be estimated with more accuracy than previous studies. Naturally reintegration of traits also showed more accurate approximate equations, and this improvement increased the possibilities for applications. With these equations, one can synthesize speech sounds with artificial personalities for certain purposes such as answering machines and "audio-help" for the users of a certain product. In addition, this model provides some implications for implicit personality theory. One can train himself to speak with a variety of personality impressions using combinations of prosodic features for different personalities.

Keywords: prosodic features, personality impressions, synthesizing sounds, implicit personality theory, personality traits

Multilevel leadership for multilevel health – an analysis of the multilevel impact of transformational leadership on employee health and well-being

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Facing permanent changes and a growing number of work-related strains leaders are faced more and more with the task to support and develop employee health and well-being in the work-context. Transformational leadership has an outstanding role in this context. The positive impact of transformational leadership on employee well-being is empirically well-established by now (Arnold, Barling, Kelloway & McKee, 2007). Additionally, the impact of transformational leadership works indirectly, meaning that leaders can positively influence attributes of the job or the company and employees can benefit from those changes (Wolf & Nebel, in prep.). A systematic analysis of the impact of transformational leadership on employee health and well-being on different levels is missing until now. The current study shows additional hints for the multi-level impact of transformational leadership by concentrating on the preventive impact on team- and company-levels. We focus on the impact of transformational leadership on the genesis of team burnout regarding spill-over and cross-over effects. Subjective and objective data was collected from $N = 1319$ (40 teams). The research methods employed were Transformational Leadership (MLQ-5 (German version); Felfe & Goihl, 2006), Demand (FIT, Richter et al., 2008), Control (SALSA, Riemann & Udris, 1996), Self-efficacy (Jerusalem & Schwartz, 1999), Physical Complaints (GGB-24, Brähler et al., 2004), Burnout (MBI-GS, Schaufeli et al., 1996), and Well-Being (WHO-Five, Bech et al., 2003). Multilevel Analysis (HML) was performed. The data was analyzed at the time. We hope to refer to the findings of Felfe, Franke & Korek (2009) who found transformational leadership to be stress-reducing on the team level. We analyze whether the same or similar processes can be found for reduction of burnout on individuals and on the team level. We will discuss implications of our findings for the prevention of burnout and will draw conclusions

for leadership training as well as leadership culture in organizations.

Keywords: *leadership, employee health, multilevel leadership, transformational leadership, well-being*

Multilingual education of linguistic minorities in India: Strategies, applications and issues

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Mother tongue (MT) based multilingual education (MLE) of linguistic minorities has become a global movement (Mohanty, Panda, Phillipson & Skutnabb-Kangas, 2009). However, application of psycholinguistic framework of bilingual education as well as MLE in diverse societies raises complex issues in respect of cross-linguistic transfer of skills, pedagogic approaches to bringing in children's MT and cultural knowledge into MLE classrooms, and socio-educational consequences of MLE. The paper presents data from different MT literacy and MLE programs for tribal children in India to reflect on these issues. The findings in respect of Bodo MT literacy in Assam, MLE programs in Andhra Pradesh and Orissa, and a cultural psychology based intervention, MLE Plus, for children's education, cultural identities, and revitalization of languages are discussed. The MT literacy program in Bodo and MLE programs in 18 other tribal mother tongues in Andhra Pradesh and Orissa are found to be promoting better classroom achievement compared to the early submersion education in dominant languages. The MT based MLE programs have positive impact on revitalization of language and community attitude towards culture and language maintenance. The MLE Plus program in Orissa with intensive community based activities and explicit focus on linking classroom learning to children's cultural experiences is found to have the most positive educational as well as cultural impact. These programs in India offer new insights on strategies and pedagogic principles of MLE. However, the sociolinguistic complexities of Indian multilingualism raise some issues in respect of scheduling of the second, third and other languages in MLE and

the need to develop suitable models of MLE for children with multiple mother tongues in the same classroom.

Keywords: *mother tongue, multilingual education, linguistic minorities, India*

Multitasking and work interruptions in hospitals: Impact on employees' well-being, individual strategies, and moderators

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In the last decades the complexity and intensity of work has increased. Employees have to deal with a big amount of information coming from several channels. This circumstance results in an increasing rate of work interruptions and multitasking demands. The aim of this study is to get an insight on the effect of multitasking and work interruptions in real work settings on well-being and to test the moderating effects of individual skills. We chose hospitals as the setting for our study, as jobs are characterized by a high rate of work interruptions. The sample of our study included male and female nurses of German hospitals. In a pilot study we interviewed 15 nurses and monitored their shift to developing an instrument for measuring the appearance of multitasking in hospital work settings. The main study has been a daily diary study using handheld computers, using random event sampling methods to examine direct effects of work interruptions and multitasking demands, as well as coping strategies over a period of five working days. We examined the appearance of interruptions and multitasking, and parameters of well-being like mood and irritation, and also considered individual mental abilities, and preferences as possible moderating variables. The data was analyzed using multi-level analysis to test for within and between subject effects over time. The pilot study emphasized the great importance of interruptions and multitasking in hospital work. Furthermore we identified possible strategies to deal with the demands of interruptions and multitasking. The results of the main study indicate differential effects of interruptions with well-being, contingent upon type of interruption, and individual coping. The results highlight the

significant role of multitasking and interruptions in hospital work settings and demonstrate their effect on well-being. Additionally we are able to give practical advices for work design with a special consideration of the aging workforce.

Keywords: *ageing workforce, multitasking, work interruptions, hospital work, coping strategies*

Mumpreneurship: A "forced choice"?

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Preference Theory (Hakim, 2000, 2002) and Institutional Theory (Baunach, 2002; Rubery & Fagan, 1995) are used to provide two theoretical frameworks to better understand the transition and motivation to enter into "mumpreneurship" for women who choose to depart from traditional employment and engage in entrepreneurial pursuits after having a child. Five in-depth case studies are used to explore the lives of Mumpreneurs. The competing influences of (a) genuine choice, versus (b) the societal and structural demands which contribute to these women's decisions to depart from "traditional" work and enter into entrepreneurship, are considered. Within this context, the link between motherhood and the entrepreneurial experience is illuminated through an exploration of how the mumpreneur orients the activities of her enterprise to her family, her child(ren) and her personal aspirations. Findings suggest that the frameworks provided by both Preference Theory (which focuses on women's choice, in affluent society, between family work and market work) and Institutional Theory (which suggests that the decision to depart from traditional, full time work is more a function of societal structures and constraints "forcing" women into particular roles and / or part time work) can be applied to our group of women. This paper points to how future work on entrepreneurship from these two theoretical perspectives can further advance our understanding of the impact of entrepreneurship on the Mumpreneur herself, her venture, her identity as a mother and her desire for a career. It is hoped that the findings generated from this research project will

highlight and inform both academic research and policy makers on important understudied groups in entrepreneurship (such as older entrepreneurs and “mumpreneurs”), as well as the holistic impact of life-stage and life-style on entrepreneurship.

Keywords: *preference theory and institutional theory, entrepreneurship, women's roles, career decision-making, identity*

Narcissism within the team: An exploratory study

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Expanding previous research on dark side personality traits, we discuss narcissistic behavior within a team context and investigate how narcissism affects interpersonal relationships within the team and how narcissistic behaviors, attitudes or reaction lead to team performance. Specifically, we examined the effects of narcissism on self- and other-ratings of performance, interpersonal conflict and climate within the team context. Survey data were collected from 43 project teams composed of 191 senior business undergraduate and MBA student participants. To achieve course requirement, all teams were formed for one semester to complete assigned projects. Participants were asked to first hand in a written paper and then give an oral presentation at the end of the semester. Before their oral presentation, we distributed questionnaires regarding narcissism, Big Five personality traits, team climate, team conflicts, and demographics to each team member. Then, at the end of the semester, we collected overall team project grades from the instructors with the permission of each participant. The results supported some of the previous research findings that narcissism is positively associated with both self- and other-ratings of team performance after controlling for three of the Big five personality traits (emotional stability, extraversion and openness to experience). However, the current findings did not show that team conflicts and team climate for innovation moderate the relationship between narcissism and team performance. Considering the profound interpersonal implication of narcissism, we believe that more

research is required on the paradoxical but charming world of narcissists.

Keywords: *narcissism, personality, team performance, interpersonal conflict*

Need for achievement, need for power, self efficacy and university student political participation in Jakarta Indonesia

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Student participation in politics is not usually directly connected with individual purposes. They usually intend to declare their opinion in order to support the people of the nation. In this research political participation is defined as ordinary citizen activities (non-violence or/and violence) in order to influence the government in making and actuating political decisions for equal interest. This research needs to know the relationship between individual personal aspects, which is assumed to have effects on political participation (need for achievement, need for power, self efficacy) and political participation. The need for achievement can be expressed as a desire to perform in terms of a standard of excellence or to be successful in competitive situations. Need for power is described as the need to manipulate others or drive for superiority others. Self efficacy is concerned with self-perceptions of how well a person can cope with situations as they rise. This research is non-experimental. The respondents are 253 university students in Jakarta Indonesia. Four questionnaires were used in this research including the questionnaire of need for achievement (reliability: 0.923), need for power (reliability: 0.855), self efficacy (reliability: 0.926) and political participation (reliability: 0.955). Validity and reliability calculations and hypothesis testing in this research involved use of a computer program. The research result shows that there is no relationship between need for achievement and political participation, but there are relationships between need for power, self efficacy and political participation. The data shows university students in Jakarta currently have low participation in politics.

Keywords: *student involvement in politics, self-efficacy, need for achievement, need for power, political participation*

Negative body image and its Impact on social physique anxiety and social anxiety in preadolescent children aged 10 and 11

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This study aimed to examine the body image of children aged 10 and 11 years ($n = 58$). Body image in children is a growing concern due to its relationship with unhealthy behaviours and mental health concerns (Littleton & Ollendick, 2003). Gender and age differences were predicted in terms of body image perceptions and social physique anxiety (SPA). Negative body image was expected to predict SPA and social anxiety (SA) also. The Social Physique Anxiety Scale, the Figure Perception and Preference Scale, the Body Areas Satisfaction Scale and the Fear of Negative Evaluation Scale were administered to a convenient sample. Factorial ANOVA's, non-parametric t-tests and multiple regression analyses were conducted in order to test the hypotheses. Positively, levels of SPA and negative body image were low in the sample overall. While negative body image and SPA was not found to increase with age, females were significantly less satisfied with their bodies overall and with specific body parts in comparison to males. In addition affective body dissatisfaction, in contrast to cognitive body dissatisfaction was a significant predictor of SPA and SA. Clinical implications in terms of prevention and intervention for body image concerns, SPA and SA were discussed.

Keywords: *body image of children, body areas satisfaction scale, social physique anxiety, figure perception and preference scale, fear of negative evaluation scale*

New analysis method for projective drawings: Texture analysis, singular value decomposition, and Fourier transform analysis

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In psychology and psychiatry, projective drawings are used to assess individual personality and holistic understanding of behavior. Especially, Koch (1949) developed a tree test, called Baum Test, for the purpose of medical practice and personality assessment. Since there is a lack of objectivity in interpretations of drawing pictures when the projective drawing techniques are used, we propose a new analysis method for the projective drawings using image processing techniques. The procedure was as follows: (1) drawing a picture, (2) scanning the picture, (3) dividing the picture, (4) the gray level histogram moment (GLHM) analysis, (5) the spatial gray level dependence method (SGLDM) analysis, (6) the gray level difference method (GLDM) analysis for the picture, and (7) the singular value decomposition (SVD) method that is a factorization of a rectangular real or complex matrix, with many applications in image processing, (8) the Fourier analysis method that can isolate individual components of a compound waveform for the image, and (9) the interpretation of the drawing picture. Image analysis methods for projective tree test were utilized to interpret psychological process of university students and patients. We analyzed the pictures for 262 university students and 23 patients with mental disorders, then interrelated statistical properties of the image analysis with the scores for psychological tests such as State-Trait Anxiety Inventory, Self-rating Depression Scale, Beck Depression Inventory, and Yatabe-Guilford Personality Test. The result suggests significant relationships between some statistical properties of the pictures and mental states such as depression and anxiety.

Keywords: *drawings, statistical image analysis, projective technique, fourier analysis, tree test*

Newcomers' job expectations and adaptations during the early stage of organizational socialization: Leader-member exchange as a moderator

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Job expectation is one of the important psychological variables influencing newcomers' socializations. Researchers have proposed the met-expectation hypothesis (MEH) which addresses the positive effect of met expectations on adaptation. However, there's still divergence on the validity of this hypothesis. Based on theory of organizational socializations, this research investigated the relations between job expectations and proximal socialization outcomes, especially the moderating role of leader-member exchange (LMX), and answered the "when" and "how" questions. Three hundred and twenty one newcomers, from nine firms in three provinces of China, participated in the research. Using longitudinal design, job expectations were measured with the self-developed Newcomer Expectations Questionnaire when newcomers were on board, and information about both proximal socialization outcomes and quality of LMX was collected from newcomers three months after organizational entry, using the Organizational Socialization Questionnaire and LMX-MDM scale respectively. Hierarchical regression technique was employed to analyze data. The results showed that: (1) When taking into account both expectations and experience, only actual experience correlated positively with socialization outcomes, which didn't support MEH; (2) LMX moderated the relations between met expectations and socialization outcomes: when the quality of LMX was low, unmet expectations impaired newcomers adaptation, which was consistent with MEH, whereas good quality of LMX might mitigate the detrimental effects of unmet expectations on adaptations; (3) the moderating effect of each dimension of LMX was different, which supported a multidimensional structure of LMX. LMX moderates the effect of met expectations on adaptations and may give an answer to the question regarding when MEH is supported, from a perspective of interpersonal interaction.

Keywords: job expectation, met-expectation hypothesis, organizational socialization, leader-member exchange, newcomers' adaptation

Novice driver perceptual learning of hazards: Preliminary results of a longitudinal study

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We interviewed teachers who have long, multi-year experience in using the Lions Quest (LQ) social and emotional learning (SEL) program at school. The aim was to describe and understand how teachers perceive the LQ program and achievement of its educational goals. Several research syntheses and meta-analyses of SEL interventions have concluded that programs concentrating on socio-emotional competencies can result in gains that are central to the goals of all schools. However, we do not know if the skills transfer to the practice situations and what the experiences of long term use of SEL programs are. LQ curricula focuses on training of interaction skills, service-learning, and violence and substance abuse prevention. It is based on the values of equal rights, respect for the needs of others, and cooperation and peaceful resolution of conflicts. LQ is international, widely known and has been available for over 20 years. Teachers and LQ instructors (12 women and 3 men) who had long experience in using LQ program at school were interviewed. The teachers worked in elementary, lower secondary and upper secondary schools. Thematic interviews were transcribed (116 pages) and processed using qualitative, inductive content analytical procedures. The themes extracted include perceived effects of the program at the individual, class, school and communal level. At the individual level, students learned empathy and expression of emotions. They started to support each other, and become able to make decisions and solve problems themselves. Teachers learned new tools for classroom management, problem solving, giving feedback, and working with groups. The program changed their values and behaviour to be more student centered. At the class and school level, teachers perceived that group safety and ability for collaboration increased. The participants were a selected group of teachers who had used LQ for many years. Consequently, their perceptions of the effects of the program were positive. However, the experiences of teachers offer significant insider's view on the perceived long-term effects of LQ program on children and the whole school community. The results can be useful in planning SEL interventions and

measures to study the effects of these interventions.

Keywords: *crash risk, perceptual learning, hazard perception, hazard anticipation*

Novice teachers' efficacy beliefs in relation to school principal support

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This study examines Omani novice teachers' efficacy beliefs and how these beliefs are influenced by school principal support. The study undertakes a theoretical framework of social cognitive theory (Bandura, 1997). Bandura contends that there are four sources of efficacy beliefs: mastery experience, vicarious experience, social persuasion, and physiological status. The sample consisted of 376 Omani teachers from three school districts. Participants were all female teachers teaching Grades One to Four. To measure teachers' efficacy beliefs, the researcher used the Teacher Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001). This scale was adapted to Arabic by some previous research. The Arabic version of the Teacher Sense of Efficacy Scale is a 24-item 5-point Likert scale. An internal consistency of ($\alpha = 0.90$) was obtained for the Teacher Sense of Efficacy Scale. To measure principal support, the researcher used a scale consisting of eight items and uses a similar 5-point Likert type scale. Similarly, a value of 0.90 was obtained for the internal consistency. The study uses multiple regressions to predict novice teachers' efficacy beliefs using demographic variables (teachers' subject, degree, and experience) and school principal support. The results showed that principal's support contributed to the prediction of teachers' efficacy beliefs over and above the effects of demographic variables. The researcher concludes that school principal support is an important variable in promoting teachers' efficacy beliefs. The author discusses implications of the findings and highlights the importance of school climate on teachers' efficacy beliefs.

Keywords: *teachers, efficacy, school support, school climate, social cognitive theory*

Occupational stress as threat and opportunity: An analysis of antecedents

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The traditional psychological approach to occupational stress reactions has been extensively focused on pathological results (Siegel & Schrimshaw, 2000; Peiró, 2008). Conversely, the positive psychology perspective emphasizes emotions, attitudes and behavior that drive well-being and more positive workplaces (Simmons & Nelson, 2007). However, as theorized by the transactional model of stress, both perspectives can be reconciled: we can appraise a threat or loss when demands exceed the resources available, but we can also appraise the situation as a challenge when seen as an opportunity for mastery, gain or personal growth (Lazarus & Folkman, 1984). The present study aimed to analyze the role played by personal characteristics such as perception (background) from patterns of existing relationships between threat and challenge appraisals. Participants were 603 professionals from human services organizations in Comunidad Valenciana (Spain); 85% were women, and the mean age of the total sample was 37.52. We ran a multinomial logistic regression analysis, Chi-Square and ANOVAs. The results show that the likelihood of having medium levels of perception of stress and challenge (Pattern One) decreases with age, increases with the resilience and increases with the category "technical assistant"; the probability of having low levels of perceived stress and challenge (Pattern Two) increases with age, with the internal locus and decreases with category "technical means", and finally the likelihood of having high levels of perceived stress and pressure and low levels of challenge decreases with age and resilience, and increases with the external locus the category of "technical means". Important factors play a role in the appraisal phase of the stress process. The intervention on personality factors is much more complex and less effective than intervention characteristics of the situation. Therefore, future research should help understand what factors or job characteristics are those who promote different patterns of stress appraisal. Implications and limitations will be discussed.

Keywords: *occupational stress, well-being, job characteristics, stress appraisal, challenge appraisals*

Occupational stressors and turnover intention: A study of knowledge workers in China

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Researchers have suggested that job satisfaction is related to both stress and stress outcomes (Sug-In Chang, 2008). However, the nature of this relationship has not fully been explained. The author contributed to a better understanding of this relationship by evaluating occupational stressors and job satisfaction, and turnover intention in a sample of Chinese knowledge workers. A sample of 687 employees was investigated using the Occupational Stress Scale (OSS), Turnover Intention Scale (TIS) and Job Satisfaction Scale (JSS) in this research. With the methods of EFA and CFA, the author obtained six dimensionalities of occupational stressors which were; work overload, co-workers, physical conditions, role conflict/ambiguity, career development barriers and work/family conflict. In addition, results indicated that only three types of stressors and turnover intention were significantly related, and their relationship was mediated by job satisfaction. The results suggest that stressors from the work environment may lead to low satisfaction and high turnover intention in modern working life, so more attention should be paid to the field of stress management.

Keywords: *job satisfaction, work-stress, occupational turnover, occupational stress, turnover intention scale*

Older drivers crash risk to other road users in Victoria

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This research aimed to determine the extent to which older drivers (80 years and older) pose a risk to other road users in Victoria, and to assess whether different licensing policies are associated with different harm outcomes.

Separate analyses were made for the State of Victoria and nationally (including Victoria). For each driver age group ('target drivers'), fatality rates were calculated for target driver deaths, their passenger deaths, road users external to the target vehicle but killed in the crash involving the target driver; all road users killed other than target drivers; and all road users killed (including target drivers). Fatality rates were calculated on three bases: per population numbers in each age category, per licensed driver numbers in each age category and per distance driven for each age category. The different road user fatality rates associated with drivers aged 80 years and older were compared to the rates associated with drivers from younger age categories. On a per population and per licence basis, overall, the older the driver, the less threat to other road users, particularly those external to the driver's vehicle. On a per distance basis, older drivers appeared to be the greatest threat to other road users. Older drivers consistently posed an increased threat to their passengers. This can be attributed largely to the frailty of their (often) elderly passengers. Based on the most recent 10-year set of national fatality data, it has been shown that in the event of a fatal crash, older drivers were the most likely to be killed – and the older the driver, the greater the probability of the driver being killed. Conversely, the older the driver, the less likely that any associated fatalities involved other road users.

Keywords: *older drivers, road fatality, car accident, driving risk, Victoria*

Online therapy: An investigation of process and practical factors

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Past research has highlighted ethical and therapeutic issues regarding using the internet as a medium for psychotherapy (Pollock, 2006; Rochlen, Zack & Speyer, 2004; Schultze, 2006). However, minimal research has explored process and practical factors of the online medium. The aim of the current research is to explore and differentiate factors that contribute to beneficial and non-beneficial counselling based upon the medium of delivery, from therapists' and clients'

perspectives. In order to do so, process factors of counselling (common factors as defined by Wampold, 2001) and practical factors are being investigated. Qualitative analysis is being used in this research to gain an understanding of clients' and therapists' perspectives of factors of therapeutic medium delivery that benefit the therapeutic process and those which do not. This research is in data collection and preliminary analysis stage and practitioners and former clients of online counselling are being interviewed. Expected results encompass the formation of common factors being different to other counselling mediums. Because the online modality is text-based it therefore impacts on how common factors such as the therapeutic alliance, catharsis and bond are formed. Common factors are expected to be present in the online medium, albeit formed via different mechanics. Concurrent disadvantageous elements of the online medium may also hinder the formation of common factors.

Keywords: online counselling, common therapeutic factors, therapeutic medium delivery, practical factors in counselling, therapeutic alliance

Organisational and individual influences in the occupational stress process: Collective efficacy and organisational identification as additional moderators in the job demand-control model

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The objective of this research is to identify those factors that mitigate or lessen the negative impact of work stressors by investigating whether group-level variables, specifically collective efficacy and organisational identification, act as additional moderators of the individual-level variables in Karasek's (1979) job demand-control model (JDCM). The theories that serve as the foundation for this research include Karasek's JDCM, social identity theory, and social cognitive theory. Repeated measure surveys were used to collect data from 120 participants nested within eight organisations. Analyses were completed in Lisrel and MLwiN. Multilevel hierarchical moderated multiple regression analyses were performed to

assess the focal hypotheses. Three-way, cross-level interactions were found between individual-level job demand, individual-level job control and group-level collective efficacy, as well as individual-level job demand, individual-level job control and group-level organisational identification. Follow up analyses revealed that when the group-level variables, collective efficacy or organisational identification, were high, individual-level job control buffered the negative effects of high individual-level job demands. The findings of these studies provide support for the notion that certain contextual factors must be in place in order for job control to act as a buffer of the negative effects of high job demands as originally hypothesised by Karasek (1979). Thus, organisational interventions should not only focus on job design at the individual level, but also take into account the context in which individuals work and target interventions to promote collective efficacy and a shared sense of organisational identity.

Keywords: work stress, job demands, collective efficacy, organisational identification

Organisational climate management, perception of organisational change and customer satisfaction

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The purpose of this paper is to identify the relationship between organisational climate, perception of changes resulting from organisational climate research, the perception of change in the branch and the organisation, and customer satisfaction with respect to service provided. Organisational climate management is when the organisation produces changes which are recognised by the employees, as a result of a diagnosis based on a piece of Organisational Climate Research. Data were collected from employees and customers of 170 branches of a service provider organisation acting in the whole of Brazil. Data concerning the organisational climate and customer satisfaction was collected in 2007 and was provided by the company. In 2009, a five point Likert-type scale was built and validated to assess the perception of the

employee of the changes implemented by the company in the course of two years. The data was compiled at the unit level and 4000 questionnaires were aggregated into 170 units. The analysis of the data was done by structural equation modelling. Models with direct relations were tested, as well as mediational models. In this study, the perception of change mediated the relationship between organisational climate and customer satisfaction. In general, the results corroborate the tested hypotheses and indicate that the organisational climate has a direct relation with customer satisfaction and employees' perceived changes related to management of the organisational climate. This study demonstrated the importance of organisational climate management and of conducting an evaluation of the perception of change. Furthermore, the study showed that organisational climate management can produce changes in the organisation which influence customer satisfaction. With respect to the development of future researches, such as the one developed in this study, it is recommended the replication of the present research occur in other Brazilian and international companies with the purpose of confirming the relationships identified herein.

Keywords: organisational climate, perceptions, customer satisfaction, employees' perceptions of change, organisational climate

Organizational Climate Scale (COE): A proposal

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Inadequate management of organizational climate, may be related to misdiagnosis and/or use of instruments that are not reliable or valid and culturally significant to the organization (Furnham, 2001). For this, the objective of this study is the validation of organizational climate scale (COE). Participants are workers from public and private organizations in Yucatan (Mexico). We ran an exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Results show seven dimensions that evaluate the organizational climate, including D1: leadership

and autonomy; D2: promotion and incentives; D3: teamwork; D4: interpersonal relationships; D5: physical environment; D6: involvement; and D7: conflict management. These results show the importance of culturally appropriate instruments for measuring organizational climate for better management. Implications and limitations will be discussed.

Keywords: management, organisational climate, leadership, team-work, conflict management

Organizational contexts that foster positive behaviour and well-being: A comparison between family and non-family businesses

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Research on how specific organizational characteristics may elicit negative or positive acts (such as workplace bullying, altruism and job performance) and how such characteristics may affect well-being (including job satisfaction and work engagement) has received little attention. Likewise, there are a few studies that focus on the similarities and differences between family and non-family businesses according to their characteristics. Hence, following and extending the three-way model of workplace bullying (Baillien et al., 2009) and the stakeholder perspective (Zellweger & Nason, 2008), the purpose of this study is to investigate whether family business and non-family business contexts have a similar or different influence on employee behaviour and well-being. In the present study 287 workers from Spain participated (47% from family businesses and 53% from non-family businesses). Employees gave free descriptions of their own organization and filled out a self-administered questionnaire. The Multiple Correspondence analysis (MCA; Abdi & Valentin, 2007) was used to analyse the organizational variables associated with different degrees of workplace bullying, altruism, performance, satisfaction and engagement. Chi-square tests and Pearson correlations were performed as well. The coordinate graphs obtained from the MCA revealed that family firms are related to more positive perceptions of the organizational

context than non-family businesses. Furthermore, the results showed that family firms are perceived as having a balanced task/employee oriented focus, a positive work atmosphere and balanced power relationships/hierarchy within the organization. Finally, family firms seem to be associated with lower levels of workplace bullying and higher levels of altruistic behaviours, workplace engagement, and job satisfaction than non-family firms. These results support previous theoretical and empirical research and emphasise that the organizational context has an important impact on employee behaviour and well-being. More specifically, this study adds value on the differentiation between family and non-family firms between several relevant aspects such as workplace bullying, altruism, performance, satisfaction and engagement. Finally, the implications of the study, its limitations and areas for future research are discussed.

Keywords: organisational context, employee well-being, family versus non-family businesses, workplace bullying, job performance

Organizational identity in a turbulent institutional environment: An upper echelon perspective

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This study explores the link between top management team characters and organizational identity under institutional pressures. Organizational identity is conceptualized as the collective 'we' articulated by the organizations themselves. Based on the upper echelon perspective, the organization can be viewed as the extension of the top management team. However, institution theorists may argue that organizations are under substantial isomorphism pressures, so this study aims at integrating the two arguments. The practical background for this study is new energy industry, which is believed to present an ideal setting for testing the two competing theoretical perspectives. A qualitative approach was employed, with content from the texts in the 'about us' section in the new energy firms' website analyzed. The corresponding material

was from other sources such as annual reports, interview transcripts and other public sources. A grounded approach was used for analyzing the data. Three-level coding, namely open coding, selective coding and theoretical coding were conducted to generate the link between concepts. The results identify common elements in the organization, reflecting the institutional pressure. In this case, environmental ethics seems to be a basic admission criterion of this industry. The organizational identity of the firms can be categorized into three sets: the Technician (who emphasizes technical excellence); the Craftsman (who is not extraordinarily good in terms of technology, but puts emphasis on operational excellence); and the Speculator (who just does what is required by the external parties and acts according to governmental policy rather than their own vision). The membership of each firm in the three sets is linked with the characteristics of the founding members, who are viewed as the flag-bearers of the firms. For example, the founder with a substantial technological background tends to form an organization which falls into the Technician category. Viewing organizations as human-like entities, organizational identity presents a powerful concept to explain and understand the behavior of organizations in a broader industrial background. In the background of new energy industry, which presents a turbulent and demanding institutional setting, this study explored the relationship between the upper echelon characteristics and the collective 'we' of the organization. The empirical results illustrate that institutional pressures do force organizations to act mimetically, but the actual organizational identities are linked more with the top management team, especially that of the founding members.

Keywords: organisational identity, institutional environment, management, upper echelon perspective, institutional pressures

Organizational innovations and dynamics of occupational stress

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Organisational changes and strategies of their implementation are among the most demanding

factors of personnel adaptation and well-being in modern working life. In order to find psychological predictors for improving efficiency of innovations application we conducted a longitudinal study with the staff of a Moscow pedagogical college during the process of its reorganisation. Several indicators of occupational stress were analysed at the different stages of this process: before, during and after modernisation. The test battery consisted of overall 16 diagnostic measures including several standardised procedures of job analysis, tests for acute/chronic stress manifestations, actual well-being, quality of emotional reactions, work motivation and a checklist for subjective attitudes to innovations. Factor and regression analyses, as well as other multidimensional statistical procedures, were used for comparing the patterns of stress manifestations at different stages of the innovation process and defining crucial factors in their dynamics. The data showed a high level of stress experienced by the personnel at all stages of organisational change. This stress has been reduced to the initial level only two years after the end of college's modernisation. The observed dynamics in the experienced stress patterns reflected the changes in motivational involvement of the staff in the process of reorganisation, from a "passive innovational readiness" at the beginning, to the "active innovational adaptation" at the final stages. The most important factor for a developing a positive stress mobilisation during the whole innovation period was the initial attitude of each person to the planned reorganisation. These findings suggest that the process of personnel adaptation to innovations can have both positive and negative effects on well-being and experienced stress depending on the level of individual motivational involvement in reorganisations and, especially, on her/his initial attitude to the coming innovations.

Keywords: *organizational innovations, occupational stress, change*

Organizational justice and well being : A pilot study among manufacturing employees

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The aim of the current study was to investigate the association of organizational justice and employee well-being. Kivimaki (2005) argues that organizational justice is a new work environment factor that impacts on employees' health and that high levels of organizational justice might ameliorate the negative effects of job strain. Respondents comprised of 82 employees from a manufacturing company. A purposive sampling technique was adopted in this study. Data were gathered from responses to questionnaire that include three sections: The first section includes demographic profile of respondents. The second part is about terms of perceived organization justice, scales developed by Moorman (1991). The final section measures employee well being. The Job Satisfaction Survey (Spector,1997), which contains 36 items, along with The Positive and Negative Affect Schedule (PANAS) (Watson, Clark, & Tellegen,1988) and The Satisfaction with Life Scale (Diener et al., 1985) were combined to assess key aspects of employee well being. The internal consistencies of the scale were highly acceptable, $\alpha = .91$ (Bruck, Allen, & Spector, 2002), $\alpha = .84$ to $\alpha = .90$ (Watson et al., 1988) and $\alpha = .87$ (Diener et al., 1985). Reliability analysis of the instruments was consistent with previous studies; $\alpha = .76$ (job satisfaction), $\alpha = .91$ and $\alpha = .95$ (positive affect and negative affect), and $\alpha = .91$ (life satisfaction). The result showed that there was a significant correlation ($r = .342, p < 0.01$) between organizational justice and employee wellbeing. Regression analysis also revealed a positive ($\beta = .367$) and significant contribution of organizational justice on well being relationship. Organizational justice explained 8.4% of variance on employees' well being. No statistically significant difference of gender was found regarding perceived organizational justice. Demographic profile of respondents was discussed. The findings of the current study found that organizational justice is a significant predictor of employees well being. Perceived low organizational justice could lead to negative consequences to both the individual and organization. Instead of organizational justice, future research should consider other factors that associate with employees well being.

Keywords: *organisational justice, employee well-being, job stress, work environment, employee health*

Organizational justice, perceived contract breach and turnover intention: The moderating effect of social dominance orientation

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It has generally been suggested that organizational justice is negatively related to turnover intention through perceived contract breach. However, this relationship can be different under some circumstances. The attitudes and values employees hold will have an impact on this relationship. Building on the social exchange perspective and social dominance theory, this study examined how individual's social dominance orientation (SDO: defined as the degree to which individuals desire and support group-based hierarchy and the domination of "inferior" groups by "superior" groups) affected the relationship between perceived contract breach and turnover intention. The participants were 581 employees from a manufacturing company. Measurements included social dominance orientation (i.e., some groups of people are simply inferior to other groups.), organizational justice (i.e., procedural justice, distributive justice, interpersonal justice, informational justice), perceived contract breach, turnover intention and other control variables. Results showed that general organizational justice was negatively related with turnover intention, and perceived contract breach played a mediating role in the relationship. Social dominance orientation moderated the mediated effects of perceived contract breach on turnover intention, such that for those high in social dominance orientation, the influence of perceived contract breach on turnover intention was weakened. Moreover, for those with high social dominance orientation, lower general organizational justice predicted low turnover intention, whereas for those with low social dominance orientation, lower general organizational justice predicted high turnover intention. Overall, this study highlights the important role of social dominance orientation

in influencing turnover intention. It also has direct implications on how organizations and managers interact with employees through building effective psychological contract for more effective management.

Keywords: *organisational justice, turnover intention, psychological contract, effective management, social dominance*

Organizational practices and support as predictors of organizational citizenship behaviors

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Given the interest in Organizational Citizenship Behaviours (OCB), it seems useful to identify the antecedents of such behaviours. According to exchange theory, prior research supports the idea that perceived organisational support (POS) is a robust predictor of OCB (Coyle-Shapiro, Kessler & Purcell, 2004). From this framework, it is interesting to empirically examine the mediating effects of POS in predicting organizational citizenship behaviour from Human Resources (HR) practices. There are also theoretical reasons suggesting that OCB could be influenced by job involvement. Yet, few studies did examine the relationships between job involvement and OCB (Diefendorff, Brown, Kamin & Lord, 2002; Cohen 2006). This study examines relationships between job involvement, POS, HR practices and OCB. The sample of the study consisted in 331 nurses. Subjects were recruited from one hospital situated in Belgium. Data for the study were obtained through the use of self-report questionnaires. The measures used to assess POS, OCB and job involvement are based on scales that appear to be reliable (Eisenberger, Huntington, Hutchison, and Sowa, 1986; Kanungo, 1982; Van Dyne, Graham and Dienesch, 1994). The OCB scale measures three dimensions of OCB: fidelity, obedience and social participation. To assess HR practices, we determined a set of four policies in consultation with the hospital management that affect the psychological contract (Rousseau, 1990); advancement, development, training and sharing decision programs. In testing POS's

mediating effects, we found it fully mediates the relationship between human resources practices and OCB-fidelity and partially mediates the relationship between HR practices and OCB-social participation. Contrariwise, there is not significant relationship between human resources practices and OCB-obedience. Results provide also insights into how job involvement impact OCB. An original contribution of the current study was that it confirms three components of OCB (fidelity, obedience and social participation) in Belgium. Second, these results confirm the value of perceiving OCB as reciprocating fair or good treatment from their employer but also as a consequence to personal individual variables. Nevertheless, HR practices and job involvement impact only OCB- fidelity and OCB-social participation.

Keywords: organizational citizenship behavior, human resources, perceived organisational support, job involvement, exchange theory

Outcome of psychological treatment on Dhaka University students

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The present study was conducted to see outcome of psychological treatments on seven students seeking help for their psychological problems at the Guidance and Counselling Centre of Dhaka University. Seven cases seeking psychological help were selected randomly at the Students Guidance and Counseling Centre of Dhaka University for giving them psychotherapeutic intervention to see its outcome on them. Mainly, Cognitive Behavior Therapy was used to see the outcome of psychological treatment of the seven cases. However, depending on the needs of the clients, Person Centered Counselling along with Cognitive Behavior Therapy was also used. To see the outcome of psychological treatment General Health Questionnaire-12 (GHQ-12), 10-point self-rating scale, anxiety scale, depression scale and goal assessment sheet were applied and pre-intervention scores were compared with post-intervention scores. The result shows that GHQ-12 scores decreased from pre-intervention to post-intervention in all cases. The pre

intervention scores of 10-point rating scale were decreased after intervention in all seven cases. In seven cases the anxiety and depression scores decreased from pre-intervention to post intervention. Among the 25 goals of the seven clients, 4% was not achieved at all and 4% slightly achieved. The results also show that 24%, 52% and 16% goals were achieved moderately, considerably and completely respectively. Marked improvements were noticed at the post intervention phase in all cases. In five cases the post intervention scores of GHQ-12 were below the cut-off point of three and in two cases it was over the cut-off point. From the 10-point rating scale it was found that for case 1, 2, 3, 4, 5, 6 and 7 the scores decreased from 8, 8, 10, 8, 10, 10, and 10 to 5.5, 1, 5, 2.5, 3, 2 and 2.5 respectively. Anxiety and depression was decreased significantly in many cases. Among the 25 goals, 24%, 52% and 16% goals were achieved moderately, considerably and completely respectively, which is also an indication of positive outcome of psychological treatment. From the findings of the present study it is highly recommended that clinical psychological services should be extended at the Students Guidance and Counselling Centre, Medical Center and all residential halls of Dhaka University.

Keywords: psychological treatment, help-seeking, guidance, counselling, counselling goals

Parents' childrearing practices and their relation to children's academic performance

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This faculty research aimed to determine the relationship between parents' childrearing practices and children's academic performance. Specifically, this study aimed to know the demographic profiles of parents of Grade Five pupils with high and low academic performances from Notre Dame of Dadiangas University – Integrated Basic Education Department and Balite Elementary School. This research also aimed to know the extent of childrearing practices of parents of pupils with High and Low Academic Performance in terms of feeding, caregiving, observing rules, imposing discipline,

rewarding and teaching values. Determining the relationship between the demographic profile and childrearing practices of parents, as well as the relationship between the childrearing practices of parents to children's academic performance, were also focused on in the study. The study used a descriptive correlation design. The respondents were chosen through purposive sampling. They were the parents and pupils who belonged to the upper and lower 30% in both schools. Data were gathered through a questionnaire for parents, which contained items on the profile and childrearing practices. A documented list of the upper and lower 30% of the Grade Five pupils was requested from the registrar's office. A home visit was also conducted to gather data. The data gathered were analyzed through percentage, weighted mean, correlation coefficient through Pearson r, and t-test. The demographic profile of parents showed that exactly 50% were employed and another 50% were unemployed in the high group while the majority, or 53.92%, of the parents of the low group were unemployed; that 45.10% of the parents in the high group were professionals while only 28.43% of the parents in the low group had finished a course in college. Furthermore, larger percentages of lower educational attainments were revealed in the low group; that majority of the families earned 2,500-15,000 Philippine pesos a month as shown by 45.10% of 2,501-7,500 earners from the low group and 32.35% of 7,501-15,000 earners from the high group and that majority of the respondents had three to five children. Although the childrearing practices in both groups were interpreted as highly extensive, it showed that the parents of high performing pupils had a higher value as shown by a 4.25 factor average compared to 3.80 of the low group. The demographic profile, except occupation, and childrearing practices of the parents of both groups were significantly related to each other. The parents' childrearing practices were significantly related to the child's academic performance in the low group but not in the high group. Based on the findings of the study, it was concluded that there was a significant relationship between demographic profile and childrearing practices except for occupation, and that there was a significant relationship between childrearing practices and

academic performance in the academically low group but not in the academically high group.

Keywords: *academic performance, childrearing practices, parental employment, parental education, demographic variables*

Partners Group: A multi-program collaboration to enhance the management Of mental illness in a community setting

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The innovative Partners Group (EPG) has resulted from vigorous collaboration among several community programs and regulatory/funding bodies, including a PDRSS program, a local Mental Health initiative, a Respite for Mental Health Carers program (MHR), VicServ, and the National Respite Development Fund (NRDF). Members of the EPG comprise approximately 16 partners of individuals who manage significant Mental Illness in Melbourne's outer Eastern suburbs. The group meets on Saturday afternoons at a PDRSS centre in Ringwood. The EPG is characterised by strong benevolent interest, a clear passion for community involvement, and a pro-active, pro-social attitude to improving and enhancing the support and management of mental illness in the community. Values of the EPG include a sincere interest in enhancing the management and coping resources of the individual, promoting a ready understanding of issues raised, a willingness to engage, share, and provide support. The EPG promotes readiness and eagerness to hear, acknowledge and advocate about individual carer issues. It is equally keen to discuss systemic concerns relating to mental health care, be it with a perspective to clinical, social or legal provisions, processes or arrangements. In early 2009 the EPG approached a MHR to explore the possibility of securing funding toward the provision of respite activity for its members. The MHR, funded through NRDF, assisted the EPG to provide a day outing with arrangements in place to provide transport and meals, and also to provide care for the care-recipients left at home. Subsequently, under NRDF guidelines and in the context of community capacity building, the MHR has secured further funding to allow the

EPG to periodically engage in a range of respite activities. Further collaboration between the Mental Health Services manager of a local CHS and the MHR Coordinator has secured additional funding from VicServ to secure an EPG Carer Consultant for the facilitation of group outings. These initiatives empower the EPG to decide what form respite intervention might take, thereby placing respite content and process where it belongs – with the carers. The MHR thus meets its aim in a new way to provide an innovative, flexible community respite response.

Keywords: *mental illness, community, mental health care, respite*

Patterns of communication and conflict resolution in couples

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The family and personal environment is one of the most important environments where the couple express their emotions and where they interact putting into practice a wide variety of patterns of interpersonal communication (dyadic communication). Based on a study of mothers, fathers and children in the family context (Armas-Vargas, 1999, 2000, 2006) we wished to study what patterns of communication between partners are related to self-esteem variables. The sample comprised 127 cases, 84 men (who had abused their partners) and 52 women (victims of domestic violence). The CPC-RC-COUPLE questionnaire (Armas-Vargas, 2009) was used. This is a test which consists of two forms (A and B), each with 50 items. In form A, the person evaluates himself/herself on communication with his/her partner. In form B, he/she evaluates his/her partner's communication with him/her. The Self-Esteem Questionnaire (CAE Questionnaire; Armas Vargas, 2004) was also used. The questionnaires (A and B) have been shown so far to have validity of content and empirical value in isolating the proposed constructs. A multivariate type of analysis has been followed: factor and correlational analysis. We offer the results of the factor analysis for each factor, internal consistency (Cronbach Alpha) and the correlation between measures of the different factors of the CPC-RC-COUPLE questionnaire

with the CAE. Form A includes four factors: Implicative-Resolving (19%; $\alpha = .89$); Explicative (13%; $\alpha = .83$); Reaching Agreements (9%; $\alpha = .88$); Excluding and Impositive (7 %; $\alpha = .72$); explained variance is 48%. Form B includes four factors: Implicate-Resolving (27%; $\alpha = .93$); Reaching Agreements (15 %; $\alpha = .87$); Aggressive (excluding and impositive) (11%; $\alpha = .77$); Explicative (6 %; $\alpha = .71$). The explained variance is 59%. Self-Esteem Questionnaire (CAE) includes four factors: I-Self (22%; $\alpha = .87$); Feeling of Uselessness (14 %; $\alpha = .81$); Others (12%; $\alpha = .82$); Feeling of Inferiority-Negative Comparison (9 %; $\alpha = .77$). Explained variance equals 57%. There is a significant positive correlation between the feeling of inferiority in women and their perception of aggressive communication (excluding and impositive) on the part of their partners ($r = .23$; $p \leq .001$). Conversely, communication based on the search for agreement in a partnership is associated with a negative correlation with the feeling of inferiority ($r = -.22$; $p \leq .001$).

Keywords: *interpersonal factors, emotional expression, self-esteem, aggressive communication, feeling of inferiority*

Perceived acceptability of eating-disordered behaviour in young adult women with and without eating disorder symptoms

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Building on previous work in the field of eating disorders "mental health literacy", we examined the perceived acceptability of eating-disordered behaviour in a community-based sample of young adult women with and without eating disorder symptoms. Participants ($N = 264$) were women aged 18 to 27 years recruited from a university campus in central Queensland by means of an internet-based survey. Self-report questionnaires that included vignettes of fictional persons suffering from anorexia nervosa (AN) and bulimia nervosa (BN), questions addressing the perceived acceptability of the problems described, and a measure of eating disorder psychopathology (Eating Disorder Examination Questionnaire, EDE-Q) were completed by all participants. Questions

addressing perceived acceptability, developed by the authors, addressed the extent to which the conditions described were perceived to be acceptable or desirable personally or socially. The same eight questions were asked in relation to each vignette. Statistically significant differences in perceived acceptability between women with symptoms ($n = 37$) and women with no symptoms ($n = 227$) were apparent on all eight items for both vignettes, such that women with symptoms perceived AN and BN to be more acceptable than healthy women. Particularly pronounced differences were observed on two items. Whereas 2.2 per cent of healthy women had often or always thought that it "might not be too bad" to have AN, 37.8 per cent of participants with symptoms had often or always thought this. Corresponding figures for the BN vignette were 5.7 per cent for healthy women and 48.6 per cent for women with symptoms. Similarly, whereas 2.2 per cent of healthy women reported that they would be moderately, very or extremely happy to have AN, 32.4 per cent of participants with symptoms gave these responses. Corresponding figures for the BN vignette were 3.5 per cent and 24.3 per cent, respectively. Although the use of a cross-sectional study design limits any conclusions concerning the direction of the observed associations, the findings suggest that the presence of eating disorder symptoms among young adult women is closely tied to the perceived acceptability of those symptoms. Hence, the findings may indicate specific targets for prevention and early intervention initiatives.

Keywords: *eating disorders, eating disorders, acceptability*

Perceived workload mediates the relationship between self-efficacy and work engagement in nurses

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Nursing is one of three professions that is susceptible to feelings of decreasing work engagement. The indicators are low levels of energy and mental resilience, lack of a sense of significance, enthusiasm, inspiration, pride and challenge while working. On the other side, when nurses engage with their work, they will

show high levels of energy and mental resiliency, have a sense of significance, enthusiasm, inspiration, pride and challenge while working. This research found that nurses who have high self-efficacy will show high engagement with their work. When they perceive that they had higher workload, the relationship between their self-efficacy and their work engagement increased. The participants are nurses from two upper-class hospitals in Surabaya ($N = 157$). The implications of these findings for health-care worker will be discussed.

Keywords: *work engagement, self-efficacy, perceived workload, nursing*

Perception of teachers and students regarding teaching of English composition in Indian senior secondary schools: A study

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This study had five aims: (1) to investigate the method of teaching composition in secondary schools; (2) to study aims of teaching composition; (3) to study whether teaching of composition aims at making learners a creative person; (4) to identify problems of English teachers on teaching composition; and (5) to gather suggestions from teachers and students regarding improvement in teaching and learning of composition. A descriptive survey method of research was used. The sample consisted of 20 teachers and 100 students randomly selected from senior secondary schools in the Kurukshetra district of Haryana (India). Two self-developed questionnaires were used. Percentages were calculated for data analysis. The study revealed that 70 per cent of teachers create a proper environment for teaching composition. Ninety per cent of teachers were not encouraging, asking students to cram essays/letters/stories and all teachers were teaching oral composition and were using translation method for teaching composition. Ninety per cent of teachers were giving instructions to students while teaching composition and all teachers were making corrections of composition in students' notebooks. Eighty four per cent of students opined that teaching of composition was not

according to their mental level, 64 per cent students indicated that their teachers were asking them to cram essays/letters/stories, all students pointed out that their teachers was teaching oral composition and all students agreed that their teachers was correcting their composition in their note book daily. All students revealed that their teacher was translating composition. In an Indian context, although English is a foreign language, continuation of English in India is both desirable and necessary for establishing relations with the rest of world. Keeping in view this fact, teachers should not ask students to cram essays/letters/stories but should create proper environment of composition and should explore better methods of teaching composition. English composition should be taught by teachers in a manner that enables students to learn without pressure. It calls for frequent in-service training programs for teachers in Indian secondary schools.

Keywords: *teaching, learning English*

Performance and explanation of ways of thinking: A metacognitive analysis of solving mathematical problems

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This study examines the relationship between grasp of consciousness and performance on problems involving Cartesian product (Vergnaud's categorization) in fifth and eighth graders from a public and from a private school in Brazil. In the context of current ideas about education which focuses on learning to think, contemporary literature has given fruitful attention to the so-called metacognitive processes in the acquisition of mathematical knowledge. Part of these studies, influenced by the Geneva School, analyzes the role of the grasp of consciousness in the conceptual construction in mathematics. However, these studies are mostly based on oral verbalizations, and not on situations in which the participant is asked to make her ways of reasoning explicit in writing, and specially when solving complex problems as those of Cartesian product. Forty-

two participants, aged 10 to 16, solved four multiplicative and/or division problems of Cartesian product in writing and explained their solutions by answering the question "How did I think to solve this problem?" Firstly, the written answers to this question were qualitatively analyzed in order to identify categories as indicators of awareness on the part of the participants regarding their solutions to the problems; secondly, the participants' performance on the problems, as well as the incidence by category of those written answers, were quantitatively analyzed to test the relationship on focus. The qualitative analysis of the answers identified three response categories as indicators of degrees of awareness on the part of the participants, which the statistical analysis revealed to be associated to their performance. Thus, progressively more refined explanations are accompanied by correct solutions to the problems, which are corroborated by significant differences in performance and in the presence of justifications for the solutions in both types of school. The relationship between implicit and explicit knowledge as inherent to conceptual evolution, and a teaching process directed toward reflection and comprehension on the part of students regarding mathematical concepts, may explain the results. Therefore, forms of intervention on the part of teachers that activate the metacognitive skills of students are recommended in the teaching of mathematics.

Keywords: *mathematics, conceptual construction in mathematics, grasp of consciousness, problem-solving, ways of reasoning*

Personality as predictor of pro-environmental attitudes and behaviours

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Several studies have examined the influence of individual differences variables on environmental engagement. Along with gender, age and education, variables such as values, time perspective, self-construals and connectedness with nature have been linked to environmental attitudes (EA) and behaviours. Specific personality traits have also been examined.

Traits such as responsibility, conscientiousness and self-confidence have been found to relate to pro-EA, while selflessness and responsibility have been found to relate to ecological behaviours. However, to our knowledge there has been no systematic research exploring the effect of the Five-Factor Model (FFM) of personality on EA and ecological behaviours. We conducted two studies to address this gap in the literature. A total of 332 undergraduate students took part in Study One (70% female, mean age = 19, $SD = 2.6$), and a community sample of 150 participants took part in Study Two (54% female, mean age = 33.8, $SD = 15.9$). Participants completed an online survey containing FFM measures (Study One: Ten-Item Personality Inventory; Study Two: Big Five Aspect Scale), the New Environmental Paradigm (NEP) Scale, the Environmental Attitudes Inventory and ecological behaviour measures. Hierarchical multiple regressions analyses were performed to examine the relationship between the big five dimensions and EA and ecological behaviours, controlling for age and gender. Only Openness to Experience consistently predicted people's environmental engagement in both studies. The findings are consistent with another recent study showing that Openness to Experience predicts environmentalism, and also with studies showing the link between this personality dimension and universalism and self-transcendence values, which have been shown to relate to pro-EA and ecological behaviours. Thus, those people who are open-minded, hold a more altruistic viewpoint and are innovative in their outlook and behaviour tend to be more environmentally engaged. However, the effect sizes in our studies were small to medium, suggesting that the predictive power of personality on environmental engagement is low. This is a positive finding suggesting that intervention campaigns can influence people's environmental engagement. Theoretical and practical implications of the findings will be discussed, and directions for future research outlined

Keywords: environmental attitudes, big five model of personality, ecological behaviours, environmental engagement, new environmental paradigm scale

Personality at work: Structural validity evidence and links to workplace outcomes for a new personality tool

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The Humm-Wadsworth Temperament Scale (Humm) has been used by personnel psychologists for over eighty years, forming the basis for the well-known Minnesota Multiphasic Personality Inventory (MMPI). This paper presents structural and validity evidence for an adaptation of the Humm. This adaptation aims to: (a) reduce the difficulty of items' language, (b) provide a clear and replicable structure at the dimension and sub-dimension level, and (c) produce scales with good internal consistency, test-retest reliability, and prediction of workplace outcomes. Participants were recruited via email for two online studies. Participants were drawn from two sources (a) individuals from recruitment and assessment databases of the last author's firm who consented to future contact, and (b) client organisations of the last author's firm. In Study One, 1895 participants (53.5% female, aged 17 to 68) responded to a large item pool developed to measure the Humm theoretical model. In Study Two, which is ongoing, participants completed personality and impression management items, as well as criterion measures (job satisfaction, turnover intention, organizational citizenship and counter-productive workplace behaviors). Participants were asked to provide an email address for their current supervisor and a co-worker, for later collection of other-report performance data. In Study One, parallel analysis, exploratory factor analysis (EFA), and confirmatory factor analysis (CFA) were used to reduce the item pool to 182 items representing 6 dimensions and 29 underlying facets of personality. The six factors represented: Emotional instability, project-focus, power-motive, self-interest, self-reliance, and extraversion. Alpha reliabilities ranged from .83 to .95 for broad dimensions, and .69 to .89 for the facet scales. Fit indices from CFA models were adequate for a 6-factor solution and good for a 29-factor solution. Study Two data will be available by the time of the conference, allowing replication of the structural model, and a test of

whether personality scales relate to self-report criteria and performance data. Available data indicate that the new personality tool has excellent psychometric properties. Data from Study Two will determine whether the instrument also promises to be a valid tool for workplace selection and development.

Keywords: *temperament, Minnesota multiphasic personality inventory, workplace selection, emotional instability, job satisfaction*

Personality profile of the drug addict in Romanian young people

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Marital adjustment was originally defined by Spanier & Cole (1976) as a multidimensional phenomenon which the Dyadic Adjustment Scale (DAS) was reported to measure adequately (Spanier, 1976). The separate dimensions of marital adjustment were reported to be the following: (a) consensus on matters of importance to marital functioning, (b) dyadic satisfaction, (c) dyadic cohesion, and (d) affectional expression. The purpose of this study is to explore if and how the behavior pattern of the women or of the man is the one influencing the dyadic adjustment of marital relationships. Ninety couples (50% males and 50% females) aged 32 to 59 years completed the Dyadic Adjustment Scale (Spanier, 1989). We selected four groups based on the scores of the two partners, and considering T scores under 30 as indicators of severe maladjustment. There are significant differences between the four groups (t Student). The groups are the following: 1. Non-distressed couples group ($N = 71$); 2. distressed couples group ($N = 8$); 3. mixed couples group: man with clinical profile, normal pattern in woman ($N = 7$); 4. mixed couples group: woman with clinical profile, normal pattern in man ($N = 4$). First, as expected, we found different patterns of behavior for non-distressed and distressed couples. Second, if only the woman has a clinical behavior pattern (low scores on affectional expression, satisfaction and consensus) the man obtained low scores on consensus. If the man has a clinical behavior pattern (low scores on affectional expression, satisfaction), the women obtained low score on satisfaction. The results discuss

different patterns of marital interaction, correlatively with the behavior of the partners and their gender. These findings are important for clinicians active in family counseling and psychotherapy, as they reveal important information about the influence of the behavior of the partners on couple relationships.

Keywords: *marital adjustment, dyadic adjustment scale, marital satisfaction, affectional expression, distressed couples*

Personality profiling of successful elite level team sport coaches

WILLIAMS, J. (Best On Ground Performance)

Sport in Australia is a billion dollar industry and making the "right" selection of coach will have a financial and personal impact on the country, the club and the team. The hypothesis is that successful elite level long term coaches will share several common personality and motivational characteristics as tested within the Hogan inventories. As part of a larger data set collection, the results of 16 long term elite coaches completed a set of Hogan Inventory Tests (13 males and three females). All coaches were recruited from invasion sports and had been head coach at the highest level for a period of at least five years. Each had succeeded in winning or being runner up in a world championship or the highest level of their sport. The sports were Australian Football League, Basketball, Soccer, Lacrosse and Netball. Hogan inventories were selected as they are commonly used as a personality assessment tool in job recruitment and leadership training. Although the coaches varied in many aspects of the 3 Hogan inventories, there were common traits that were found. These coaches are highly competitive, very self confident, high in self expectation, highly stress tolerant, resilient, self determined, altruistic, not money driven and people's people. Personality profiling may prove to be a useful tool in the recruitment process of elite coaches. This study is significant because in order to establish the foundations for an elite coaching competency model there is a need to establish a sporting leadership baseline data set. Long term successful coaches data can be used for psychological comparison and provide an assistance in the recruitment practices of Clubs

and Associations. In addition, it has the potential to be expanded to provide a larger data set of assistant coaches, sacked coaches and elite players.

Keywords: sport psychology, elite level long term coaches, personality assessment, personality profiles, recruitment of sport coaches

Personality traits as effective factors in tendency to addiction: Psychological comparison of addicts and non-addicts

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Since the introduction of Diagnostic and Statistical Manual of Mental Disorders, Third Edition (DSM-III) in 1980, there has been a growing interest in the study of patients with substance use disorders (SUD). The driving force behind this field has been, and still is, the high clinical pessimism about the prognosis, and the difficulties in the clinical management of the characteristics of diagnosed patients. In this way the important matter to study is the evaluation of co-occurring personality problems and substance abuse. So the study investigated the personality traits of addicted and non-addicted people. Ninety addicted people and ninety non-addicted people were randomly selected and McCrae & Costa's (1992) Revised Neuroticism-Extroversion-Openness Inventory was administered on them. Mean scores were compared with independent t-tests. Findings indicated that there are differences among means of personality traits in two groups. Addicted people are more neurotic and open to experience than non-addicted people and non-addicted people are more extroverted, agreeable and conscientious than addicted people. This indicates that evaluating with reliable measures, and with more attention to personality traits, can help psychiatrists and psychologists diagnose the cause of tendency to addiction, reduce the psychological problems that are related to addiction before and during drug treatment, reduce duration of treatment and enhance efficacy of treatment methods.

Keywords: revised neuroticism-extroversion-openness inventory, substance use disorders, addiction, personality traits, neuroticism

Polish soccer hooligans: Euro 2012, violence and sense of alienation

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Poland and Ukraine will organize Soccer Euro 2012 Championships. One of the most disturbing problems connected with the event is the presence of a soccer hooligan subculture in Poland. The data gathered by the Central Police Command revealed that in 2008 the number of soccer-related hooligan incidents was as high as 228, with 49 fans and 58 police officers seriously injured. The aim of the study is to explain the phenomenon of soccer hooliganism using the concept of sense of alienation and to emphasize the importance of prophylactic strategies to cope with it. Thirty-two boys aged 14 to 16, intensely involved in football hooligan group was diagnosed. The research techniques applied: Locus of Control Questionnaire *Delta* by Drwal (1980), Sherwood's *ISC* inventory, Ignaczak's *WIAICH* Inventory, and the Social Support Scale and Sense of Alienation Scale (both by Kmiecik-Baran). Deviant behaviours, manifested in groups of sport supporters, are explained as a way of coping with the sense of alienation, expressed in a destructive manner. The failures that hooligans experienced in environments are most vital to proper development and thus favoured high levels of physical aggression, low levels of self-esteem and external loci of control. Perceptible deficits of social support facilitated the formation of a high level of sense of alienation. For high risk group boys, the most dominant way of overcoming such a state is to form a group of a destructive character, composed of individuals experiencing similar difficulties. The sense of belonging to such a group becomes the source of support and the base for shaping identity at the same time. The sense of being rooted into the local community and identification with a group of soccer fans is accompanied by a sense of increasing alienation and inability to function in the wider social context. The research revealed that the sense of alienation can be successfully lowered by modifying the predisposing conditions. It is argued that prophylactic projects aimed at eliminating causes that promote negative phenomena can bring the expected results, whereas schemes that are repressive in their

character resulted mainly in transferring the incidents beyond the stadiums in Poland.

Keywords: *social alienation, soccer hooliganism, locus of control, sense of belonging, self-esteem*

Portuguese college students: Different levels or different creativities?

IBÉRICO NOGUEIRA, S. (Universidade Lusófona de Humanidades e Tecnologias)

The aim of this research was to characterize and analyze the differences in the creativity levels of students from different areas of graduation. We also intended to study the creativity differences between Portuguese and German students, to reflect about the role of the cultural and academic backgrounds in creativity development. This research involved a convenience sample of 600 participants, 200 from Psychology, 200 from Architecture and 200 from Engineering, 319 male and 282 female, ranging between 20 and 48 years of age. To assess the creativity levels we used the Test for Creative Thinking- Drawing Production (TCT-DP; Urban & Yellen, 1996). We found significant differences between the graduation areas, favoring the architects. In addition, we found statistically significant higher creativity levels in the final year students (fifth year of their graduation), by comparing them to the lower levels of graduation (third and fourth). There is a significant statistical difference between the Portuguese and the German sample, favoring the latter. We did not find any significant differences between males and females in terms of their creativity levels. We must reflect on the importance of the participant's area of graduation for the creativity levels. We also need to reflect about the importance of the higher levels of education and its positive correlation with the creativity levels. The significant statistical difference between Portuguese and German samples, favoring the latter, leads us to reflect about the cultural differences in terms of educational goals and motives. The similarities between males and females concerning their creativity levels agree with the findings of several other studies.

Keywords: *creativity, gender differences, education, creativity*

Positive orientation and subjective well-being of cancer patients

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The aim of the present study was to examine a) the relationship between positive orientation and subjective well-being and b) to identify the predictors of subjective well-being. The sample consisted of 61 cancer patients undergoing treatment at a local hospital in Allahabad, Northern India. Twenty three males and 38 females participated in the study. Their mean age was 50.13 years ($SD = 14.76$). More than 50% of the respondents were illiterate. Semi-structured interviews were used. The interviews lasted for about 40 minutes. Informed consent was taken. The initial section of the Interview schedule included questions pertaining to Demographics (age, gender, income, level of education), and Illness description (severity of illness, duration of treatment, perceived controllability). The later section of the Interview schedule covered items relating to positive orientation. Positive orientation was measured with the help of the Silver Lining Questionnaire which consisted of 38 items and future orientation which consisted of five items. The Subjective Wellbeing Questionnaire consisted of 24 items. A five-point rating scale was used to tap the responses. The findings showed that Positive orientation of patients (beliefs that every cloud has a silver lining and positive future orientation) correlated significantly with subjective well-being ($r = .708^{**}$ and $r = .676^{**}$ respectively). Multiple regression analysis of patient data demonstrated that family income, beliefs in silver lining and positive future orientation emerged as significant predictors of subjective wellbeing. The higher the family income of patients and the greater their positive orientation (strong beliefs in silver lining and more positive future orientation), the higher their level of subjective well-being was. The implications of the findings will be discussed. To unravel the mysteries of silver lining and future orientation, more studies are needed in this area.

Keywords: *cancer patients, future orientation, positive orientation, subjective well-being, perceived control*

Powered two-wheelers' conspicuity and human functional failures: An in-depth accident study

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Until now, powered two-wheelers (PTW) have been a really dangerous means of transport despite many efforts to change this. In France, the number of PTW riders involved in accidents each year is more than 25% of people killed in accidents, despite these vehicles representing only 6.5% of the number of vehicles on the road and they drive four times kilometres less than car drivers a year (ONISR, 2007). The PTW conspicuity problem is identified in the literature as a main issue of insecurity. According to a previous study, the non-detection of PTW is involved in 60% of accident cases between PTW and another vehicle (Van Elslande et al., 2003). PTW are less detectable physically. Nevertheless, the detectability problem cannot be reduced to this characteristic. The aim of this study is to investigate different aspects of the PTW conspicuity problem in crashes in order to determine the origin, the context of onset, explanatory elements associated and to look at adapted operational solutions. The survey is based on an evaluation of the perceptive difficulties that drivers meet when they are confronted to a PTW. It makes use of the analysis performed on a sample of 184 accidents involving a PTW detectability problem by the confronted driver. Accident data were collected in the frame of the In-depth accident study (EDA) conducted at INRETS (France). Data on drivers' difficulties and their production context variables were obtained by gathering detailed information at the scene of accident itself. Data were collected by multidisciplinary teams and covered the three components of the road system: vehicles, drivers and infrastructure. Each accident surveyed gave rise to a reconstruction in time and space of the events leading up to it. Then, a classification model of human functional failures (Van Elslande & Fouquet, 2007) allowed us to define breakdowns in the driver's functional chain (perception, diagnostic,

prognostic, decision and execution) and contextual explanatory element of these human failures (endogenous or exogenous). The preliminary results show that the non-detection of PTW could be explained at different levels: Sensorial level linked to narrowness of PTW; behavioural level linked to specific driving of PTW (e.g. lateral and frontal acceleration capacities); or cognitive level linked to attentional capacity of confronted drivers (e.g. PTW are less present on the traffic and car drivers don't expect to meet them). Moreover, these factors are not exclusive and could often be combined in an accident situation. Yet, the implication of one factor is not most often enough to be determinant. Thus, the different factors' impact is considered in drivers functional failures. These results, however, reveal that the lack of PTW detectability induces mainly perceptive failures, but not only these. This issue can be at the origin of difficulties in situation evaluation, in PTW behaviour understanding or in decision making. In conclusion, this study proves that the conspicuity problem is a complex issue which can be explained both by physical, cognitive or behavioural parameters. The lack of detectability has an impact on every functional level of driving. These results will be revisited from an ergonomic point of view in order to consider efficient means to fight against consequences of PTW poor detectability.

Keywords: *traffic psychology, accident reconstruction, powered two-wheelers, driver's functional chain, driving*

Predicting client uptake of online family dispute resolution: An extension of the Unified Theory of Acceptance and Use of Technology (UTAUT)

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Recent amendments to the Family Law Act have resulted in a proliferation of family dispute resolution (FDR) providers throughout Australia. However, a key issue faced by these services is client accessibility, which online delivery aims to address. In the context of a national pilot of

online FDR (OFDR), this study aimed to evaluate a model of client uptake intention. Integrating trust and personal web innovativeness (PWI) into the existing framework of the UTAUT, this study sought to identify the salient contributing factors to clients' OFDR uptake intention. A total of 362 clients were surveyed by phone following registration for an existing national dispute resolution service. To reduce client inconvenience, exemplar items were chosen for each construct. Subject matter experts assisted in item selection. Evaluation of the model was conducted using partial least squares (PLS). Clients reported widespread access to the technologies required by OFDR. The UTAUT model and added variables (trust and PWI) accounted for a significant amount of variance in OFDR uptake intention ($R^2 = .617, p < .01$). Specifically, performance expectancy ($\beta = .412, p < .01$), effort expectancy ($\beta = .201, p < .01$) and trust in OFDR technology ($\beta = .537, p < .01$) contributed the greatest proportion of variance to behavioural intention. Social influence did not contribute significantly to intention ($\beta = .052, p = .278$). Domestic violence was negatively correlated with uptake intention ($r = -.161, p < .01$), effort expectancy ($r = -.140, p < .01$) and performance expectancy ($r = -.158, p < .01$). Technological accessibility does not appear to be a major inhibiting factor to clients' intended uptake of OFDR services. Further, the UTAUT was validated in this unique context. Implementations of OFDR services should consider users' attitudes, perceived effort to use the system, trust in online technology and access to resources to maximize uptake. The negative effect of domestic violence on OFDR uptake intention, though expected, suggests further investigation. Overall the findings offer direction for future studies of the specific conditions where OFDR may be most effective and acceptable.

Keywords: *online family dispute resolution, family dispute resolution, web innovativeness, client trust, technological accessibility*

Predicting traffic accident rates: Human values add predictive power to age and gender

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It has been well-documented by researchers in traffic psychology that age and gender predict the accident rate - males and younger drivers tend to be more involved in accidents. In the present study our aim was to test whether human values carry incremental validity in explaining traffic accidents. Human values were defined as a set of abstract beliefs related to desired human goals (Schwartz, 1992). Five hundred twenty five drivers (age range from 18 to 60, 46% females) participated in the study. Besides the rate of involvement in traffic accidents we also measured four dimensions of human values: Conservation, Self-Transcendence, Openness to Change, and Self-Enhancement by the Portrait Value Questionnaire (Schwartz et al., 2001). Hierarchical regression analysis showed that human values add a predictive power to explaining traffic accidents over that provided by the measures of age and gender. Particularly, value dimensions of Conservation and Self-Enhancement are significant predictors of traffic accident rate besides age and gender. Human values explain accident rate in a meaningful and interpretable manner, thus suggesting an important, culturally based understanding of driving accidents.

Keywords: *traffic psychology, human values, driving accidents, self-enhancement*

Predictors of academic success: A longitudinal comparative study

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Students who learned English as a foreign language perform equally well academically in a North-American post-secondary institution as students who are native speakers of English. A 19-item questionnaire on academic success was administered to a sample of 427 English as a Foreign Language (EFL) students and 322 Native English Speaking (NES) students who entered a North American post-secondary institution for the first time during the academic year 2002-2003. Their cumulative Grade Point Averages

(GPAs) during each of five subsequent academic years up to 2008 were analysed along nine predictors. Analyses include descriptive statistics, t-tests, one-way ANOVA, bivariate correlation, multiple regression, and discriminant analysis. The mean cumulative GPAs of EFL and NES students grouped according to the nine predictors range from 2.19 (number of employment hours) to 2.86 (number of independent study hours) and 2.22 (number of employment hours) to 3.00 (being married), respectively. When paired on each of the nine predictors, mean differences between the two groups are not significant. Coefficients of correlation between the predictors and GPAs are generally low, many are negative, yet many are significant. Variance analyses yielded significant *F*'s for eight predictors. Three discriminant function coefficients correctly classified 33.4% of the participants into 11 program clusters. There were 172 EFL students and 89 NES students who graduated from their program of studies. The study refutes the myth that EFL students, compared to NES students, are academically disadvantaged due to the language barrier. The hypothesis that EFL students perform equally well academically as NES students in a North-American post-secondary institution is supported. The study recommends further studies to include the variables that were not among the nine predictors, i.e., academic self-concept, motivational attitudes, such as self-efficacy beliefs and a high motive to succeed; and cognitive style.

Keywords: *Academic success, English as a foreign language, Post-secondary, Students*

Predictors of adaptation among adolescents from immigrant families in Portugal

NETO, F. (Faculdade de Psicologia e de Ciências da Educação)

The aims of this study were to investigate the degree of psychological and sociocultural adaptation among adolescents with immigrant backgrounds in Portugal and the factors that may predict adaptation. The study sample consisted of 755 immigrant adolescents from seven ethno-cultural groups (Cape Verdeans, Angolans, Indians, Mozambicans, East Timorese,

Sao Tomese, and Guineans) and 320 native Portuguese adolescents. Adolescents from immigrant families reported similar adaptation to that of their native Portuguese counterparts. Predictive factors, including socio-demographic and intercultural contact variables, were significantly linked to youths' adaptation.

Keywords: *social psychology, psychological adaptation, sociocultural adaptation, adolescents' social adaptation, immigrants*

Predictors of creative performance in the workplace

IMBER, A. (Inventium)

Few studies have examined the predictors of creative performance in the workplace. We set out to examine whether a variety of predictors, which had been shown to predict creative performance in laboratory studies, actually led to more creative performance at work. Over two hundred employees across more than forty different organisations took part in the study. Employees were asked to complete a series of questionnaires, ability tests, and reaction-time tests. In addition, over four hundred of their managers and co-workers participated in the study to rate the employees on their creative performance at work. Our study revealed several predictors of creative performance, including openness to experience, creative self-identity, promotion focus, and cross application of experiences. These variables predicted behaviours such as creative problem solving ability, ability to sell in ideas to others, and ability to work collaboratively on projects requiring creative thinking. The implications of this study are significant for the field of recruitment, in that we are now able to predict the likelihood that job applicants will exhibit creative behaviours in the workplace. The findings also have important implications for learning and development for companies who are looking to identify prime employees for championing innovation within the organisation. This study also adds to the limited body of knowledge of the variables that predict creative behaviour in the workplace.

Keywords: *creativity, innovation, organisations*

Predictors of psychological well-being: 1150 Women

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The aim of this study was to identify predictors of Psychological Well-Being (PWB) among women undergoing diagnostic mammograms for breast cancer. As part of a larger study examining the PWB of women pre- and post-diagnosis of breast cancer, data on 1150 healthy participants (non-diagnosed) were analyzed to determine predictors of PWB in women. Participants were well-educated, exhibited normal ranges of PWB and psychological distress. Ages ranged from 23 to 87 ($M = 50.16$, $SD = 10.84$). Using simple correlations and linear regression, 15 variables were analyzed to determine predictors of PWB. Ryff's (1989) Scales of Psychological Well-Being (SPWB) total score and six subscales represented PWB as dependent variables. Binary correlations of 15 variables as potential predictors of well-being showed that three variables (depression, $r = -.63$; stress, $r = -.57$; and perceived social support, $r = .42$) were significantly related to PWB. Using hierarchical regression, these three variables were strong predictors of PWB, contributing 37% of the variance in total PWB after controlling for 11 variables. PWB subscale correlations showed a hierarchy of responses suggesting that the three variables were most strongly related to Self-Acceptance followed by Purpose in Life, Positive Relations, Environmental Mastery, Personal Growth and Autonomy. Psychological distress (depression and stress) and social support appear to be key attributes in understanding women's PWB. In relation to subscale analyses, it is difficult to discern whether or not high self-acceptance leads to increased social support and less distress or if low distress and high social support contribute to stronger self acceptance. Similar questions can be posed for each of the three variables. For example, would enhancing women's social support and decreasing their distress give them a greater sense of self-acceptance? Findings in this study show that depression, stress, and

social support are strongly related to women's ability to accept themselves, a central feature of mental health (Ryff, 1989). An interaction effect between distress and social support, however, was not found. Therefore, future research will focus on understanding how predictors operate in different dimensions of PWB for women.

Keywords: cancer diagnosis, psychological well-being, psychological distress, social support, self-acceptance

Predictors of treatment-seeking by in-patient problem gamblers in Canada: A theoretically-driven approach

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Cumulative gambling literature has pointed to serious underutilization of problem gambling treatment and services by pathological gamblers worldwide. Yet the existing research on help-seeking among problem gamblers is scarce, highlighting a need for systematic empirical inquires. The present research addresses this gap by identifying and assessing a constellation of critical psychosocial antecedents of help-seeking among problem gamblers based on an *a priori* model previously tested with structural equation modeling by Cramer (1999). With a sample of 29 problem gamblers who attended a three-week in-patient gambling treatment program in Southwestern Ontario, Canada, this study measured 15 social, cognitive, coping, health and financial variables hypothesized to be critical to treatment-seeking behaviour for problem gamblers. The variables included: expected problems related to gambling, gambling moderation self-efficacy, help-seeking attitude, self-concealment, self and social stigma, coping, social support from friends, family and significant others, gambling-incurred debt, general health and comorbid alcohol abuse. Specifically, the study examined: a) predictors of the participants' willingness to seek help across seven types of interventions and support; and b) changes in the predictor and criterion variables from pre- to post-treatment. The results of a series of multiple regressions showed varied patterns of help-seeking behaviours among the participants depending upon the types of help and services in question.

At pre-treatment, the regression model was effective in predicting problem gamblers' willingness to seek psychotherapy or counselling in particular. At post-treatment, the same model was effective in predicting problem gamblers' overall willingness to seek help. Problem gamblers' willingness to seek most forms of help and services examined in the present study improved from pre- to post-treatment. There were statistically significant changes in the participants' overall willingness to seek help and in their willingness to access Gamblers Anonymous in particular between pre- and post-treatment. Furthermore, the participants reported improvement with respect to overall health, social support from family members, and adaptive coping strategies. Moreover, participants reported a decrease in their tendency to conceal personal secrets and this decrease was especially pronounced among women. The findings of the study suggest the utility of systematically investigating treatment-seeking grounded in a theoretically framework. Interpretations of the findings and discussion of their implications for future research and clinical intervention are presented.

Keywords: *problem gambling, problem gamblers, help-seeking, gambling moderation self-efficacy, problem gambling*

Preference of leadership styles: A cross-cultural study between Turkey and Italy

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Leadership has been a topic of interest since ancient times. Even though perspectives are changing, leadership still remains as a major concern for numerous nations and organisations. Especially as the borders of business world begin to disappear and people from different cultures began to be in much closer relationship, the importance of leadership styles are increasing. The perception of "ideal leader behavior" varies across countries. The aim of this study was to investigate and compare perceptions of ideal leader behaviors from two different countries: Turkey and Italy. In this study the Ohio State Leadership Behavior Description Questionnaire (LBDQ XII) was used in

data collection. Discriminant Analysis was used to identify which of the twelve LBDQ dimensions accounted for the significant differences between the two subject groups. The data sets were composed of 202 Turkish and 200 Italian employees' responses. The findings indicate that seven LBDQ dimensions: representation, demand reconciliation, tolerance of uncertainty, tolerance of freedom, role assumption, consideration, and production emphasis, discriminated between the two countries. Findings reveal that Italian employees prefer leaders that perform representation ($b=0.262$), tolerance of uncertainty ($b=0.359$), tolerance of freedom ($b=0.574$), role assumption ($b=0.673$), and consideration ($b=0.267$) behaviors more than Turkish employees. Turkish employees prefer leaders with demand reconciliation ($b=-0.108$) and production emphasis ($b=-0.269$) behaviors more than Italian employees. As a result of this research, we found the ideal leader behavior expectation of the two countries showed significant differences, as indicated in previous studies.

Keywords: *leadership style, cross-cultural, Turkey, Italy*

Preliminary evidence for the role of psychosocial strength in addressing problems in childhood and adolescence

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The current presentation will describe the empirical evidence that supports a strength-based approach to assessment and treatment of children and adolescents with diverse mental health problems. The initial focus of the presentation will be on the assessment of strengths and the relationship between strengths and areas of difficulties that were ascertained from a large sample of youths between the ages of 11 and 18 years of age. The presentation will then focus on two prospective studies that examined the role of strengths on treatment outcomes. The first study examined strengths as they related to outcomes in a residential substance abuse program for adolescents. The second study evaluated a

strength-based intervention for bullying that was implemented in a primary school. Results indicate that strengths tend to be negatively correlated with measures of psychopathology. However, youths with high levels of psychopathology still have areas of strength that can be used to overcome difficulties. In our studies, specific strengths were associated with improved outcomes. We have provided preliminary evidence that suggests that strengths are related to psychopathology and may play an important role in overcoming adversity. Through assessing strengths mental health professionals can identify areas of strength that may help clients overcome their problems. In addition, strength-based interventions may provide a valuable addition to traditional treatments. Ongoing research is currently underway to help further clarify these propositions.

Keywords: assessment, treatment of children and adolescents, residential substance abuse problem, adolescent psychopathology, bullying

Pride, self and culture: A cross-cultural study among Chinese and American university students

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Pride is a type of self-conscious emotion. Until now it has received considerably less attention from emotion researchers than basic emotions such as joy, fear and sadness. The aim of this study is: (a) To explore types of pride events; (b) to explore the characteristics of attribution between Chinese and American university students; and (c) to explore the role of self-construal when participants experience self-conscious emotions of pride using cross-cultural background. The participants are from Chinese and American universities, enrolled in psychology courses. Participants completed on-line questionnaires. The pride questionnaire is a modified version of the Geneva Appraisal Questionnaire (GAQ- Pride). All participants also completed a Self-Construal Scale (SCS) and a brief demographic form. Data were analyzed with the statistical software SPSS 16. An analysis of variance (ANOVA) was used to test the hypothesis. Regression analysis was used to

explore the possibly mediating function of self-construal. Through content analysis, we found the characteristics of types of pride events are similar between Chinese and Americans; for example, Achievement Event is the main event type that aroused the feeling of pride. Internal appraisal is the main style of evaluation for both cultures. The feeling of pride is experienced more in public places. The feeling of pride is more related with family for Chinese students compared with American students. Chinese students mainly have interdependent-self characteristics, and American students mainly have independent-self characteristics. Culture can influence the self-conscious emotion of pride. The feeling of pride between Chinese and American university students has some coherent characteristics and some different characters. Two countries' students have different self-construal characters, and the role of self-construal as a mediator is not significant.

Keywords: pride, self-consciousness, self-construal, Geneva appraisal questionnaire, interdependent and dependent selves

Proactive coping, positive mood and rehabilitation outcomes following orthopaedic joint replacement

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Orthopaedic joint replacement is an increasingly common surgical procedure aimed at reducing pain and improving physical functioning. It has recently been recognized that psychological and cognitive factors can greatly influence an individual's post-surgical recovery, above and beyond the effects of preoperative function and surgical trauma. An individual's coping style, the way in which they typically deal with problems they encounter, may be a particularly relevant consideration in understanding how they will cope with the difficulties associated with joint replacement. Engaging in proactive coping, a coping style that is goal-oriented and involves approaching stressors as challenges rather than threats may be particularly beneficial. Individuals who engage in proactive coping have been previously shown to experience higher levels of positive emotion. Experiencing higher levels of positive emotions during stressful

encounters, such as following surgery, has been shown to help individuals to find meaning in those encounters, and successfully recover from them (Tugade & Fredrickson, 2004). It is hypothesized that older adults who engage in proactive coping would experience improved psychological and functional rehabilitation outcomes following joint replacement, and that this relation would be mediated by the experience of increased positive mood. The relation between proactive coping, mood, and psychological and functional rehabilitation outcomes was examined in a longitudinal study of 228 older adults undergoing rehabilitation following joint replacement surgery. Shortly after admittance to a rehabilitation centre, participants completed a series of self-report measures, including assessments of proactive coping and mood. Subsequently, on the day prior to discharge, trained medical professionals assessed the success of a patients' rehabilitation. Support for the proposed mediation model was found, where proactive coping style was associated with increased vigour, which was in turn associated with improved functional and psychological outcomes. A similar relationship was not found for the experience of negative mood. Improved rehabilitation outcomes may be experienced by individuals who engage in proactive coping, due in part to their increased positive mood. Theoretical and practical implications of the association between proactive coping, mood and rehabilitation outcomes are discussed in the context of interventions to foster proactive coping in older adults.

Keywords: proactive coping, mood, joint replacement

Problem coping style as a mediator between dispositional optimism and adjustment to university

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This study examined the relative influence of dispositional optimism, and problem coping styles on adjustment to university for first year university students. The study examined adjustment by both Australian-born students and international students. Participants were

1097 first year students at the University of New South Wales, Australia. Students completed measures of dispositional optimism, adult attachment, attachment to parents and peers, coping styles, and adjustment (psychological, social, academic). Results indicated that dispositional optimism, attachment relationships with parents and peers and problem coping styles were associated in expected directions with adjustment for both local and international students. Success at university, demonstrated by academic achievement, showed a statistically significant association with the constructs examined. In the current sample optimistic students reported more adaptive coping skills, had more positive attachment relationships with parents and peers and adjusted more quickly to the transition to university. Finally, optimism, coping and relationships with parents and peers in facilitating adjustment applied equally to both local and international students giving support to the cross-cultural applicability of the core constructs.

Keywords: dispositional optimism, coping styles, adjustment, adult attachment

Problems faced by primary school students belonging to socio-economically disadvantaged sections of Indian society

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This investigation, conducted in India, aimed to: (1) study the academic/educational problems of primary school students belonging to socio-economically disadvantaged family backgrounds; (2) study the personal problems of primary school students belonging to socio-economically disadvantaged family backgrounds; (3) study school related problems of primary school students belonging to socio-economically disadvantaged family backgrounds; (4) to study teachers' related problems of primary school students belonging to socio-economically disadvantaged family backgrounds; and (5) study parents' related problems of primary school students belonging to socio-economically disadvantaged family backgrounds. A descriptive

survey method was used. The study sample consisted of 200 students belonging to socio-economically disadvantaged family backgrounds of six government schools of Jhajjar district of Haryana, India. A researcher-developed questionnaire and Chi-Square test was used for analysis of the data. The study indicated the following main problems faced by Schedule Caste students, who are socio-economically disadvantaged in primary school: (1) children develop fear regarding school and teachers; (2) these children are afraid of corporal punishment given by teachers; (3) lack of facilities in school; (4) books of stories are not made available to children; (5) frequent corporal punishment is given to children; (6) these children have to do domestic work; and (7) lack of environment and adequate space for studies at home. In India, in spite of efforts made in this direction, there exist numerous problems in the field of elementary education due to existing socio-cultural conditions/contexts and socially disadvantaged communities/weaker sections. The major proportion of children belonging to these backgrounds do not complete their education up to elementary school-level and either remain out of school or prematurely dropout from school without completing elementary school-level education. Therefore, there is still a need for further thinking in this context.

Keywords: primary school, socio-economic disadvantage, schedule caste, India, elementary school

Process Experiential Emotion Focused Therapy - An inquiry of peer supervision 'in-mode'

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Supervision is increasingly being required of trained psychologists to promote high quality counselling, continuous learning and psychological health. Group supervision models can provide invigorating and challenging professional development opportunities, allowing practitioners to enquire, observe, practice and learn in ways that cannot be achieved in one-on-one supervision. The aim of this study was to determine the effectiveness of a peer supervision framework using Process

Experiential Emotion Focused Therapy (PEEFT) in mode. Effectiveness is indicated by improvements in the psychologists counselling competencies. Within a participatory inquiry methodological framework data was collected from a Melbourne peer supervision group. Five Melbourne psychologists with varied backgrounds met monthly in an informal setting for two and a half hours practicing peer supervision in a context of trust and exploration. The structured format comprised discussion on preparatory reading, analysis of issues from case examples and an experiential exercise. PEEFT methodology requires the therapist to notice and track the client's emotional and physical sensations using an empathically-attuned, client-centred, and interventionist approach. Group participants self selected as supervisor, therapist or observers according to 'what is emotionally present' and participated in triad work. Within a safe and respectful environment practitioners practiced PEEFT techniques, reflected and gave feedback on the process while remaining 'in-mode.' Theory was applied in a sensitive, honest and supportive manner during evaluation. A formal evaluation of the peer supervision process used in the group was conducted after an 18 month period. All psychologists reported a heightened sense of self-awareness, self-efficacy and satisfaction associated with skills development and consolidating theory through the experiential process. The effects were found to occur at both a professional and personal level with improved competencies within supervision and counselling sessions. The PEEFT model of peer supervision was found to be successful due to improved counselling competencies. The 'in-mode' framework provided an innovative, efficient, effective, and satisfying model of training and supervision for psychologists working in various counselling positions.

Keywords: supervision, group supervision, process-experiential emotion-focused therapy

Process-experiential emotion-focused therapy (PEEFT) - Supervision "in-mode"

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The Process-Experiential Emotion-Focused Therapy (PEEFT) approach to therapy uses specified client markers or indicators of experience, to direct the therapist's choice of process interventions or tasks. Traditionally, supervision in this area tends to focus on the appropriate use of these tasks, the analysis of client emotional processing and the developing relationship between the client and counsellor. While the PEEFT counselling method is expressive and process-oriented, the supervision experience is potentially content "heavy" and directive. The aim of this study is to explore an "in-mode" model of supervision consistent with PEEFT markers and tasks. This presentation is structured to include a brief overview of the work in the area so far and report on a participatory line of inquiry the supervisee's experiences. As part of a PEEFT supervision group (circa 2005), involving psychologists and psychotherapists, there has been an exploration of PEEFT markers, to inform a supervision practice that is more process based. For example, tasks such as empty chair and two-chair work are used to debrief the therapist, "bring the client more to life," and to clarify for the counsellor those blind spots and dilemmas they are experiencing in the counselling relationship. The issue of distinction between therapy and supervision was also investigated. In addition, innovative Professional Development (PD) Days have been developed. These days incorporate triad work, theoretical discussions around application of tasks and live supervision. A pioneering advance sees supervision conducted in a 'fish-bowl' group setting and 'in-mode', providing the supervisee with an opportunity to personally explore their reactions to clients and group members to contribute to the supervision process. Supervision becomes less concentrated on the "unknown client's story" and more on the counsellor's and supervisor's "known" experiencing. As this exploration continues, a theory of PEEFT supervision is developing that: supports the counsellor's work with the client, enhances their own experience of the tasks and highlights the processes operating in the counselling relationship.

Keywords: counselling, process-experiential emotion-focused therapy, emotional processing, supervision, professional development

Procrastination in the workplace: What demotivates performance?

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Workplace procrastination has recently become academically topical. The works of Choi (2005) and Dingfelder (2006) have addressed workplace productivity but not the influence of underlying motivation in the same manner. Temporal Motivation Theory (Steel, 2007) has done in the analysis of procrastination. This study aimed to define a motivation structure of workers and hypothesized that this motivational structure has a direct and contrasting relationship with the level of worker procrastination. One hundred and forty seven Russians of different trades participated in the study. Various methods and questionnaires were used including "Personal Motivational Structure" (V.E. Milman), "Motivation of Professional Activity" (C. Zamfir), "Value Inventory" (S. Schwartz) and "Professional Performance" which was developed and validated. To determine underlying redundancies among the motives, the data were factor analyzed. A principal components method (VARIMAX rotation) was used to extract factors and a multiple regression analysis was conducted to assess the influence of motivation types on procrastination level. The procrastinator motivation structure was then built. There were four factors retained in the motivational structure of Russian workers; "Creation Factor", "Prosperity Factor", "Altruistic Factor" and "Reinforcement Factor" (stability for factor analysis yielded the value .785). The value of R^2 was .68, which was highly significant $F(12.23) = 24.02$, $MS_{\text{residual}} = 23.58$, $p < .001$. The standard error of estimation was 4.86. It was found that the motivational structure of workers with high work procrastination was three times more consistent than that of workers with low or average work procrastination. Nevertheless, no significant differences were found establishing a homogeneous relationship among the three motivational structures $rs = .81$ ($p < .001$) for high and low procrastinators and $rs = .75$ ($p < .005$) for high and average procrastinators. The connection between motivational components and levels of professional procrastination was revealed and correlated with underlying motivation factors. It

was demonstrated that procrastinators have higher adaptive abilities, i.e. they can switch motivations easily to procrastinate, but in general their motivation is similar to employees with low and average levels of procrastination. Although the majority of independent variables alone correlated significantly with the activity level, only activity motivation, creativity, achievements and stimulation accounted for a significant amount of unique variance of procrastination.

Keywords: *procrastination, workplace, motivation, productivity, Russian*

Professional counsellors' experiences and perceptions of multicultural counselling in Malaysia: A qualitative examination

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This research in progress explored the experiences and perceptions of 11 multicultural counselling practitioners with regard to the field of multicultural counselling in Malaysia. Semi-structured interviews were conducted with 11 professional counsellors in Malaysia. These counsellors were registered with the Malaysian Board of Counsellors and were holders of a practising license. They came from different work settings and different ethnic, religious, gender, and age groups. Based on a qualitative analysis using NVivo 8, participants noted that aspects of being a multiculturally competent counsellor in Malaysia included open-mindedness, flexibility, active listening, knowledge and awareness of cultural issues, skilfulness in making cultural interventions, self-awareness, and broad exposure to diverse life experiences. Most of the participants also stated that the challenges to becoming multiculturally competent included lack of knowledge regarding other cultures in Malaysia, lack of skill when dealing with clients who presented culturally sensitive issues in Malaysia such as lesbian and gay issues, and lack of support and training in multicultural counselling competency. However, many participants agreed that the current national movement towards "One Malaysia", which emphasises national unity by encouraging mutual respect and trust among the different

racers in Malaysia, has had a great impact towards increasing their awareness and understanding regarding diversity and multicultural issues in the Malaysian context. These results indicate that multicultural counselling is a rapidly emerging profession in Malaysia. Multicultural counselling competency needs to be integrated into all counselling in Malaysia. Continuing support for practising counsellors, counsellor educators, training institutions and government and non-government bodies, to promote and enhance current theoretical understanding and practice of multicultural counselling, is needed. Future research directions for improving the current education and training of counsellors are also discussed.

Keywords: *multicultural counselling practitioners, cultural interventions, multicultural counselling competency, training, counselling competency*

Profile of time perspective and subjective well-being among Taiwanese

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A balanced time perspective (BTP; Boniwell & Zimbardo, 2004) is usually operationally defined as a combination of high scores on past positive (PP), present hedonistic (PH) and future (F) in conjunction with low scores on past negative (PN) and present fatalistic (PF) in terms of the Zimbardo Time Perspective Inventory (ZTPI; Zimbardo & Boyd, 1999). In this study, we investigated profiles of time perspective and its correlation with subjective well-being (SWB) in Taiwan. Participants comprised 420 Taiwanese young adults (278 females and 142 males) recruited from five universities in northern Taiwan. The 56-item Zimbardo Time Perspective Inventory (ZTPI: Zimbardo & Boyd, 1999) and five-item Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen & Griffin, 1985) was translated from English into Chinese by the researchers. The data contained sufficient shared variance for factor analysis (KMO = .79) and Bartlett's test of sphericity ($\chi^2 = 2412.613, p < .001$ for ZTPI; $\chi^2 = 967.572, p < .001$ for SWLS) identified the possibility to perform factor analysis. A 25-item modified Chinese Version Zimbardo Time Perspective Inventory and five-item Satisfaction With Life Scale Chinese Version

was used in this study. Results showed 81 participants holding a BTP profile and 319 participants without a BTP profile. Compared with non-BTP group, the group with a BTP profile had significantly higher scores on SWLS ($t = 5.662, p < .001$). Besides this, the five temporal frames (PP, PN, F, PH and PF) were correlated with SWB. There were no significant correlations between PF and SWB. People with higher scores for PP, F and PH had greater subjective well-being ($r = .420, p < .001$; $r = .277, p < .001$; $r = .139, p < .01$, respectively). Individuals with more PN had less subjective well-being. Most of these results are consistent with the findings reported by Drake, Duncan, Sutherland, Abernethy and Henry (2008). The relationship between BTP and SWB exists across different cultures.

Keywords: balanced time perspective, satisfaction with life scale, subjective well-being, temporal frames

Promoting effects of complete model essay and incomplete model essay learning on pupils' narrative writing

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In the past, in composition teaching, pupils were generally only provided with complete model essays, and rarely were incomplete model essays used. However, the authors believe that the results of learning from some types of incomplete model essays may be better than the results of learning from complete model essays. In order to verify the hypothesis, authors established an evaluating indicator of pupils' narrative writing, and designed one complete model essay and eight different types of incomplete model essays. A total of 300 third-grade pupils were randomly divided into ten groups with one group being the control group and the other nine being experimental groups. At the beginning of the experiment, the experimenters presented a narrative with the same subject to the ten groups. After pupils completed the composition ten minutes, the control group did not learn anything via model essay, and the other nine experimental groups respectively learned one type of incomplete model essay. After 30 minutes, the experimenters presented a subject to the ten

groups as the same as before, then let pupils complete the composition. According to the evaluating indicator of pupils' narrative writing, the pre- and post-narrative writing performances were assessed, and the total scores and sub-scores calculated. Compared with the control group, narrative writing performances of experimental groups were all significantly promoted. The differences among post-narrative writing performances of the nine experimental groups were significant. After third-grade pupils had learned the different types of narrative model essays, the narrative writing performances all improved significantly. In regards to the total score, the "added the end" incomplete model essay learning group performed best, "fill the contents" incomplete model essay learning group was second, complete model essay learning group was third, and the "added elements" incomplete model essay learning group performed the least.

Keywords: complete model essays, incomplete model essays, student narratives, composition teaching, narrative writing

Promotion regulatory focus, affective commitment and manager-rated performance predicting intention to leave in retail banking employees

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The aim of the study was to examine interactions between regulatory focus of promotion, affective commitment and manager-rated performance in relation to intention to leave. The study included a national sample of 785 retail banking employees across 181 branches. Participants completed an online questionnaire and responses were matched to individual performance as rated by the manager. Descriptive statistics and correlations were calculated for all variables. Data was then centered to reduce possible concerns with multicollinearity. Controlling for age, organisational tenure and job satisfaction, hierarchical moderated regression analyses were conducted to test the three hypotheses proposed. The manager-rated performance-intention to leave relationship is influenced by level of promotion focus ($\beta = -0.07, p < .05$). With increasing

performance ratings, high promotion focus individuals indicated reduced intention to leave, but those with low promotion focus tend to become more likely to consider leaving as performance increases. Results also indicated that the affective commitment-intention to leave relationship is influenced by level of manager-rated performance ($\beta = -.05, p < .05$). As performance increases, individuals with high affective commitment indicate reduced intention to leave, but those with low affective commitment indicate higher intention to leave. The relationship between affective commitment and intention to leave was not significantly moderated by promotion focus ($\beta = -.05, p = 0.07$). The findings indicate that a combination of promotion focus, manager-rated performance, and affective commitment are useful factors to consider in relation to understanding intention to leave. More specifically, the findings are useful to advance understanding of strategies for retaining high performing employees. Practical and theoretical implications of these unique findings, together with suggestions for future research are discussed.

Keywords: intention to leave, promotion focus, staff retention, bank, affective commitment

Prospective links between playing violent electronic games, hostile attributions, normative beliefs and aggression in pre-adolescence

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Playing electronic games is a popular leisure activity of pre-adolescents, yet many of these games are age-inappropriate and contain violence. A large number of studies have shown the negative effects of violent games on aggression (Anderson et al., 2004; Möller & Krahe, 2009; Polman, Orobio de Castro & Van Aken, 2008). As causal relationships are still questionable, the present study uses a longitudinal approach to investigate the prospective links between playing violent electronic games and aggression. Since research on girls' use of electronic games is often overlooked, the present study analyzes the longitudinal associations for girls and boys

separately. A short-term longitudinal study was conducted in two waves of data collection with a time lag of six months. The longitudinal sample comprised 169 pre-adolescents (38% boys) aged 11 to 14 years at Time One (T1; $M = 11.80, SD = 0.64$). Participants were asked to name their five favorite electronic games, which were then categorized according to their age appropriateness and violent content using the European classification system for electronic games, PEGI. Hostile attributions and normative beliefs were measured via instruments developed by Möller (2006). Aggression was assessed with a measure developed by Little et al. (2003). A multiple group longitudinal mediation analysis was conducted using game preference at T1 as the independent variable, aggression at Time Two (T2) as the dependent variable, and attributional style at T1 and normative beliefs at T1 as mediating variables. The results revealed important gender differences in that consuming age-inappropriate violent electronic games over a period of six months caused higher aggression amongst girls. Unexpectedly, no effects of electronic game usage could be observed for boys and there were no mediational effects of attributional style or normative beliefs in both groups. The present study reveals that girls preferring age-inappropriate violent games belong to a group of "high-risk-players". Girls had a higher vulnerability for the effects of violent electronic games on aggression. Playing violent games at T1 was a risk factor for displaying aggressive behavior at T2 in girls only. Based on these results, further female-oriented research on electronic games is recommended.

Keywords: electronic game usage, pre-adolescents, aggression, gender differences, violent games

Prospective memory deficits in ecstasy/polydrug users

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Previous research has revealed that recreational drug users believe themselves to be impaired in aspects of real world memory including prospective memory (PM). However, it remains

unclear whether these self-perceptions are accurate. The impact of ecstasy-polydrug use on PM was investigated in a sample of ecstasy-polydrug users and non-ecstasy users. Laboratory PM tasks were devised and added to the existing self-report measures of PM to test whether any impairment on different aspects of prospective memory was present in ecstasy-polydrug users when compared to the control group. Laboratory measures included tests sensitive to time and event based PM and long term episodic PM. Self report measures included long term episodic, short term habitual, internally cued PM, strategies people adopt to remember and finally retrospective memory. Ecstasy/polydrug associated deficits were observed on both laboratory and self-report measures of PM. The present study extends previous research by demonstrating that deficits in PM are real and cannot be simply attributed to self misperceptions.

Keywords: *prospective memory, polydrug use, memory*

Proximological approach in the psychology of health

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The aim of this research was to study the influence of family on a patient's health and personality, as well as the influence of chronic disease on the caregiver's health and quality of life. The method included the Luria comprehensive neuropsychological battery, Spilberger State-trait Anxiety Inventory, Wylie Self-concept Assessment, Scales of Quality of Life (for the patient and their care-giver), and Inventory of Internal Representation of Disease. Trait anxiety correlated with the duration of disease and the family situation of the patient: the patients living alone without wife or children were more anxious than those living in families. Internal representation of defects correlated more with emotional disturbances than real motor deficit. Significant correlations were seen between quality of life scores and duration of disease and the score of cognitive disturbances, which proves an objective value of subjective measures. Interdependence between quality of life of the patient and their caregiver was

revealed in Russian, French and Spanish studies using the same Questionnaire of Quality of Life. The burden of care interferes with economical well-being, physical health, psychological functioning and social well-being of caregivers. Patients with less cognitive disturbances, lower depression and anxiety, and balanced type of internal representation of disease, show better results in rehabilitation and lower interference with the quality of life of their caregivers. In conclusion, health concepts should be one of the main orientations in psychological rehabilitation, because the subjective factors are as much or even more important than objective ones for the disease progression or regression. The quality of life and internal representation of one's own disease are integral components of the psychology of health. The patient-caregiver dyad should be viewed as a unit when detecting problematic situations and targeting of appropriate and efficient interventions by professional practitioners.

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Keywords: *quality of life, internal representation of disease, caregiver health, chronic disease, patient well-being*

Psychobiological origin of mental health: The effect of returning to the evolutionary dietary/blood lipid pattern

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Experimental studies indicate that ω 3 PUFAs play an important role in neurones' structure and function. The brain is quite rich in ω 3 PUFAs and several studies suggest a role of ω 3 PUFAs in neurotransmitter synthesis, degradation, release, re-uptake and binding. The main aim of this study was to review the latest accumulated results in the field and to propose a physiological and evolutionary explanation for the effect of dietary lipids on psychological behavior and human well-being, on the assumption of the Columbus Concept that stands for the return of the evolutionary dietary/blood lipid pattern. The study consisted of overviews of psychological,

medical and health databases, a.o. PubMed, PsychINFO and EBCSO, to NOV 2009. Inclusion criteria were: (1) dietary intervention with $\omega 3$ PUFAs, (2) outcomes including affective function, (3) human participants, (4) randomized controlled or clinical controlled design. Among nearly 100 retrieved references, 24 randomized controlled trials were identified and included in the present study. Many of them indicate a reduction of affective symptoms following supplementation. The most effective dose in mood disorders was estimated at a level of one to two grams per day, indicating a possible crucial influence of blood serum/plasma $\omega 6:\omega 3$ ratio and/or total blood omega-6/3 status (www.columbus-concept.com). We can envisage practical solutions to a number of different types of psychic dysfunctions and to even improve behaviour in healthy subjects. Based on a proper balance of essential dietary components, i.e. essential fatty acids, the Columbus Concept appears to enable the optimum development of the genetically-encoded potential of an individual, directing him/her towards health and well-being. The correct – read the evolutionary selected - balance between $\omega 6$ and $\omega 3$ fatty acids in brain cell membranes is important to mental function (DHA/ARA) & health (EPA/ARA). This new paradigm (psychobiological origin of mental health) in applied psychology opens the door to developmental medicine that encompasses practical solutions for development of human well-being and humanity. The TsimTsoum Institute (www.tsimtsoum.net) was recently established to foster research and development in this newly discovered area of Human/Nature YinYang interaction.

Keywords: *neuronal structure and function, Columbus concept, dietary components, genetically-encoded potential, well-being*

Psychological aspects of Korean unification revisited: Malleability of explicit and implicit attitudes of South Koreans

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From the social conflicts between East and West Germans after German unification, it can be

inferred that prejudicial attitudes could be a potential problem for Korean reunification. The dual-process model suggests that prejudicial attitudes are comprised of both explicit (conscious) and implicit (non-conscious) attitudes. Within this framework, past data suggest that South Koreans explicitly and implicitly preferred South Korea over North Korea, and while explicit attitudes could be influenced by context effects (e.g. positive news about unification efforts), implicit attitudes were not similarly influenced (Kim, 2003). However, recent research suggests that implicit attitudes could be influenced by associative exposures, implying that the pairing of North Korea or North Koreans with positive valences could change implicit attitudes. The purpose of the present studies was to investigate ways to reduce South Koreans' explicit and implicit prejudicial attitudes toward North Korea and North Koreans. Three studies were conducted. In Studies One and Two, we investigated whether explicit and implicit attitudes toward South and North Korea could be altered by exposure to positive or negative news concerning the relationship between the countries in a laboratory (Study One); and whether attitudes could be altered with experience of a real, positive development in the two countries' relationship (Study Two). In Study Three, we investigated the effects of associative priming on explicit and implicit attitudes by exposing participants to subliminal associations between North Koreans and positive valences. Explicit attitudes were affected by context effects both in the laboratory (Study One) and in response to real events (Study Two) in the expected direction, but implicit attitudes were not affected in both studies. In Study Three, implicit attitudes were less pro-South Korean as a result of exposure to association of North Koreans with positive valences, while explicit attitudes were not affected. The data suggest that explicit attitudes are influenced by context effects while implicit attitudes are influenced by associative exposures. Understanding of the characteristic of implicit and explicit attitudes could lead to strategies that are effective methods in reducing the explicit and implicit prejudicial attitudes, to overcome potential social consequences of Korean unification.

Keywords: *implicit and explicit attitudes, prejudicial attitudes, associative exposures, context effects on attitudes, social consequences of unification*

Psychological assistance for preschool children with mild perinatal pathology of central nervous system

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The urgency of this research was caused by the progressing prevalence of perinatal pathology of nervous system among children population of the developed countries. Generally the psychological research has focused on studying the effects of grave damage to the central nervous system such as infantile cerebral paralysis and mental retardation. The practical influence of mild perinatal pathology of the central nervous system (CNS) on the mental ontogenesis is not studied, consequently, there are not assistance programs for these children. Our research was devoted to this problem. The investigation consisted of the following stages: (1) The analysis of the features of mental development of children with mild perinatal pathology of CNS in comparison with healthy children. (2) Development and implementation of the assistance programs. (2) Assessment of the program's effectiveness. Ninety two children (5 to 6 years old) were investigated: children considered healthy but with mild perinatal brain injury in the anamnesis – 52 persons; healthy children – 40 persons (the control group). The research revealed the typical deviations of mental development of the children with perinatal pathology of CNS: neurodynamic dysfunctions (fatiguability, psychic inertness, fluctuations of tempo in mental processes, change of the pace of activity etcetera), emotional and behavioral disturbances (emotional lability, change of the emotional sensibility, aggressiveness and negativism etcetera), some negative features of the development of their mental functions – speech, attention, perception, verbal memory, verbal-logic thinking, and also the reduced self-control capability. The program of psychological assistance for these children was worked out, it included three component parts: neuropsychological correction, psychological help to children and their families, socio-

psychological work in the educational environment. The repeated diagnostics spent after this remedial course has shown substantial improvement of indicators of development of mental functions and social adaptation of children. Parents and educators reported a decrease of behavioral and emotional disorders in children. Thus according to the data of research, the perinatal injury of the central nervous system even in case of a favorable outcome negatively influences upon the mental health of children. Also this research allows us to assert that an integrated psycho-socio-pedagogical assistance is the effective for improving of mental development of these children.

Keywords: *central nervous system, brain injury, children*

Psychological capital and authentic leadership: Examining their impact on both extra role and deviant workplace behaviours

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Contemporary organisations are challenged more than ever to find innovative, cost-effective ways of improving productivity, performance and customer service. The purpose of this study was to examine the relationships between two emerging constructs; Psychological Capital (PsyCap) and authentic leadership and the organisational outcomes; extra-role behaviour and employee deviance. Arguably, psychological capital, comprising hope, resilience, optimism and self confidence, could emerge in the presence of authentic leadership and lead to engaging in extra role behaviours. Conceivably, the converse is likely, such that where leader authenticity is low, psychological capital will be diminished and counterproductive or deviant behaviours more likely. One hundred and seventy seven employees from a diverse range of organisations completed an online survey measuring levels of PsyCap, perceptions of their leaders' authenticity and reported frequencies of the two contrasting organisational behaviours. Hypotheses were tested using a series of regression equations. As predicted,

PsyCap shared a positive association with extra-role behaviours and a negative association with deviance. Authentic leadership also demonstrated a significant positive association with PsyCap. Contrary to predictions PsyCap did not mediate the relationships between authentic leadership and the two workplace behaviours. The results of this study provide empirical support for the relationships between PsyCap, authentic leadership and two central organisational outcomes. To successfully survive and prosper through the current financially challenging times, organisations that can promote both PsyCap and authentic leadership are likely to encourage employees to go beyond their current role to benefit the organization. The ongoing investment in employees' psychological resources, combined with the development of genuine, transparent leadership arguably creates a foundation for sustained competitive advantage and a superior organisational experience.

Keywords: *productivity, organisational performance, customer service, psychological capital, extra-role behaviour*

Psychological contract breach and work attitudes: The role of age

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Demographic development which is characterized by an increasing life expectancy and a simultaneous decrease in birth rates, means that the share of 'older' employees in companies is steadily increasing. We assume that the changed age structure in companies has an impact on the relationship between employees and employers, whereby this relationship is operationalized in terms of psychological contracts (PC). One subsequent aspect is the breach of psychological contracts (PCB). There are findings confirming that PCB is related to work attitudes. Based on Socio-emotional Selectivity Theory, we presume that older people evaluate PCB less negatively. Therefore, we presume that age could moderate the relationship between PCB and work

attitudes. The aim of the study is to identify differences between younger and older employees in the perception and the effect of PCB. Therefore we investigated the effects of a perceived PCB on employees' work attitudes (job satisfaction, affective commitment and turnover intentions) in general, and tried to determine age as a moderating variable for the relation between PCB and employee attitudes towards their work. The analysis is based on data collected from employees ($N = 461$) of different German companies by means of an online and a paper-and-pencil survey. We conducted correlation and regression analyses to test our hypothesis. The results prove the moderating effect of age on the relation between PCB and two of the three named work attitudes. The age of the employees alleviates the effect of PCB on work satisfaction as well as on turnover intention. However, the moderator hypothesis for the relation between PCB and affective commitment must be rejected. There is evidence that the impact of PCB on employees' work attitude differs from older to younger employees.

Keywords: *work attitudes, psychological contract, ageing workforce, socio-emotional sensitivity selectivity theory, job satisfaction*

Psychological discrimination on different cultural exchange: City custom comparison of Shanghai, Tokyo, and Seoul

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Three East Asian countries: China, Japan and South Korea share common Chinese character culture tradition. However, the Chinese culture tradition changes from time to time, generation to generation. In addition, after the Chinese culture spreads to East Asian countries, it also combines with the native culture and produces the different custom activities. Then, the different cultural exchange psychology emerges. Shanghai is located at the central China Yangtze River estuary. In the Ming dynasty and Qing dynasty, it was only a small, ordinary coastal city. After 1840' China and United Kingdom Opium War, Shanghai opened as a port, accepted the Western civilization and imported

science and technology. The city rapidly expanded, soon became the liveliest metropolis of East Asia. In modern Shanghai city, customs mixed together rich contents both of folk custom from the south of Yangzi River and of science, artistic, morality, including social customs from European and American civilizations. By taking in deferent cultures and keeping pace with the times, the city has formed a kind of unique culture psychology which is the so called "Shanghai style". Shanghai's rising, has brought the huge influence for the modern China's city development. Tokyo expanded rapidly in Eto times and became the political center of Japanese islands. From the mid-19th century, Tokyo began to open to the western world. Intimidated by American warship at Yokohama, the Japanese government had no choice but to implement the free trade, and end the system of "close the door of country", which had been carried out for several hundred years. Following this there was "the Meiji Restoration" and a great mass fervor appeared at Tokyo. People imitated and learned from the European and American civilization, and popularized it to other cities, towns and villages. Western civilized custom had an advantage in Tokyo city custom, especially in the high class of society. However Japanese traditional customs still widely existed in Tokyo city's lower level. This custom style of "blend of Japan and the Western world", became the foundation of the approach "to escape from Asia and enter into Europe" in high society of modern Japan. Seoul is located at the Korean Peninsula middle Hanjiang River's estuary, and for several hundred years has been the capital of Li Korea dynasty. Many times it encountered the historical experience which the foreign army invades, enables South Koreans to have one kind of serious inferiority, and the self-respect and pride feelings which occur when one strives constantly for self-improvement. The South Korean always worried that others despise themselves, and thus must always defend own good image by any means possible, which thus causes the South Korean to take the face especially as a psychological feature, and this also is obvious in Seoul city social custom aspects. Comparatively, the Japanese already will not yearn for the next life or the heaven, and only will take the present world benefits as heavy, its value orientation and the national disposition will have the pragmatism tendency.

In the different cultural exchange aspect, the South Korean culture slightly owes the compatibility, but the Japanese culture presents the multiplicity and compound. Since Buddhism has spread to Korea, it occupies the dominant position is the Mahayana Buddhism throughout. Afterward, into the Korean time Confucianism presented after the national leadership idea, also repels Buddhism. Japan and South Korea are treating the Kong Zi theory aspect. In South Korea, only the stressed that the intrinsic judgment and the moral supreme have the very strong speculation about Zhu Xi's theory, and what is considered as legitimate is Confucianism. However Japan's scholars not only have accepted Zhu Xi's theory, but have also widely accepted the intense realistic criticalness Wang Yangming's theory. Japan's Confucianism has not looked like South Korea's Confucianism, and becomes the ruling class the absolute behavior way. Japan and South Korea have practiced the centralization system, but afterward Japan onto the place decentralization path, but South Korea was still has been maintaining the powerful centralization system.

Keywords: *culture exchange, Asian culture, Japan, Confucianism*

Psychological follow-up of top level athletes in France: Place and role of the scientific associations

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France institutes a legal medical follow-up in 2004 for top-level athletes which includes a psychological examination since 2006. The paper presents the place and role of the scientific associations during the preparation of the law and since its application and focuses upon the ethical aspects. The concerned athletes are ranked at international level and received financial support from the Sport Department. Young talents are also subject to the law. The global population is around 6000 persons. The medical follow-up includes one psychological examination each year (2 each year for under 18 athletes) among different medical examinations like cardiac echography and biological analysis. In case of any examination suspecting a medical problem threatening the athlete's health, he/she

can be prevented from licence. The paper analyses the process that drives to the law from an organisational point of view and according to ethical criteria. Difficulties encountered concern firstly the relationships between medical and psychological associations during the conception of the law, secondly the way to define the characteristics of the psychological examination according to ethical criteria, and thirdly the way examinations are performed. The actual organisation of the psychological examination will be exposed. Some examples of difficulties encountered on field will be provided and partial results concerning fencing will be presented. The role of scientific associations is very important during laws' conception and application in order to secure ethical aspects.

Keywords: *athletes, legal medical examination, France*

Psychological measures of hardiness and self-handicapping predict outcomes from elite military training

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Psychological tests have a long history of use in the selection of military personnel. In recent years, there has been renewed interest in examining the ability of personality-based measures to predict outcomes from military training (Hartmann et al, 2009). For example, research has found that measures of hardiness predict outcomes from United States Army special forces training (Bartone et al, 2008) and measures of self-handicapping predict outcomes from British Army training (Richards et al, 2002). The aim of this study was to examine the ability of hardiness and self-handicapping measures to predict outcomes from elite military training in an Australian sample. Using a prospective research design, self-report measures of hardiness (Dispositional Resilience Scale, 30-item) and self-handicapping (Self-Handicapping Scale, 25-item) were administered to 139 military personnel (mean age = 27.9 years) prior to attempting a three-week military training course and then correlated with course outcome for each participant (successful versus unsuccessful). Hardiness scores were

significantly higher for successful ($M = 72.1$, $SD = 6.9$) than for unsuccessful candidates ($M = 67.5$, $SD = 6.7$), $t = 3.3$, $p < .001$, $d = 0.68$. Self-handicapping scores were significantly higher for unsuccessful ($M = 36.6$, $SD = 10.6$) than for successful candidates ($M = 30.3$, $SD = 8.8$), $t = 3.2$, $p = 0.002$, $d = 0.61$. Logistic regression analyses confirmed that hardiness and self-handicapping scores significantly predicted course outcome. This study has found that individuals who successfully complete an elite military training course are significantly higher in psychological hardiness and lower in self-handicapping than individuals who are unsuccessful. The effect sizes suggest these factors play a moderate but significant role in predicting success in stressful environments. The study replicates the findings from previous research into these constructs and extends previous research by investigating both measures in an Australian sample. We recommend that future research continues to explore psychological factors that predict success in high-stress occupations to assist the development of reliable screening tools for personnel selection.

Keywords: *Military personnel selection, Self-handicapping, Hardiness, Military training outcomes, Personality-based measures*

Psychological resilience as a predictor of well-being among spouses of persons with dementia

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The current study examines the degree to which psychological resilience predicts the well-being of spouses of persons with dementia one-year later. From these analyses, two pairings of canonical variates emerge as significantly correlated. The first captures significant percentages of variance of each of the facets of resilience (i.e., commitment to living, perceived control, and challenge) as well as higher socioeconomic status, family income; this canonical variate predicts the physical and mental health of caregivers one-year later. The second is defined by the absence of commitment to living and predicts lower life

satisfaction for women with less formal education and more health conditions. These findings suggest that psychological resilience as initially reported is a harbinger of both the mental and physical well-being of spousal caregivers over time.

Keywords: *resilience, dementia, caregivers, caregivers, life satisfaction*

Psychological resources and depressive symptomatology in students with and without migration in their family

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Migration is present around whole world and it is considered a stressful life event that is accompanied with multiple psychological processes of adjustment and adaptation that have an impact in health. This study sought to identify if there were differences in psychological resources (affective, cognitive and social resources) and depressive symptomatology in students with families that have or have not had the experience of migration. The participants were 287 Mexican college students, 51% of whom had the experience of migration in their family and 49% who had not. Psychological resources were measured with the Psychological Resources Scales (affective, $\alpha = .82$; cognitive, $\alpha = .71$ and social, $\alpha = .77$) by Rivera Heredia & Andrade Palos (2006) and depressive symptomatology was measured with the Center of Epidemiologic Studies Depression Scale (CES-D) (Radloff in 1977), validated in Mexico by Marino, Medina-Mora, Chaparro & Gonzalez-Forteza (1993). The scales were applied in the classroom, with agreement from the participants. With a t-student analysis the following significant differences ($p \leq .05$) were found: students with migration in their family had less self-control, more difficulties with sadness, more presence of self-reproaches and more difficulty asking for help when they needed it, than students without the experience of migration in their family. In

regards to depressive symptomatology, students with migration had less positive affect, more sadness, more isolation and more suicidal ideation than the other group. These results demonstrate the need to develop, apply and evaluate intervention programs for this vulnerable population. They should be directed to increase affective, cognitive and social resources.

Keywords: *migration, depression, psychological resources, self-control, self-reproaches*

Psychological theories of help-seeking by male victims of intimate partner abuse: Implications for psychological practice

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In this study we aimed to explore the factors that influence male victims' decision-making about seeking help in relation to intimate partner abuse (IPA). Our second aim was to examine male victims' help-seeking within three theories of help-seeking developed in relation to female victims of IPA: 'Survivor Theory', 'Reclaiming Self Theory' and 'The Decision to Leave Model'. Semi-structured interviews were conducted with male victims ($N = 15$), service providers ($N = 8$), and close friends and family of male victims ($N = 6$). Participants identified 11 barriers to men seeking help following IPA, and four facilitating factors. Participants also described men's help-seeking decision-making processes. The help-seeking processes described by participants are consistent with those outlined in the three theories developed to explain women's help-seeking. As with women victims, a male victim's decision about seeking help involves an evaluation of his options to ensure his safety and reclaim his sense of self within the constraints of adhering to his existing gendered world-view. The main implication for psychologists who work with male IPA victims is: what has been learnt about the help-seeking behaviours of female victims of IPA can be applied to men but strategies to engage men and work with them must be applied within the context of contemporary understandings of masculinity.

Keywords: *male victims' decision-making, intimate partner abuse, help-seeking, masculinity, sense of self*

Psychological therapy of a case with marital conflict, insomnia and hypertension

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A 33 year old married Malay Muslim lady referred to our unit with chief complaints of giddiness, fainting attack and insomnia. A detailed history revealed that the patient was diagnosed as having hypertension since 2002 and receiving medication. She was admitted to Accident and Emergency 34 times in two years with complaints of fainting attacks and giddiness. She also had complaints of insomnia with fear of death due to hypertension. Each admission lasted for one to four days. All investigations including EEG, chest x-ray and CT scans were reported to be normal. A detailed psychological evaluation, interview with psychological tests such as GHQ, STAI and NEO-P, were administered. Test results revealed anxious personality traits with significant psychological distress. The patient underwent 12 sessions of psychological treatment over the period of three months. She was accompanied by her husband for treatment even though she received individual sessions of Psychological therapy. Her severe interpersonal conflicts with ambivalence, her insomnia and anxiety were treated successfully. She was advised to come for follow-up once a month and it continued for six months with good recovery.

Keywords: *insomnia, hypertension, anxiety, fear of death, interpersonal conflict*

Psychological wellbeing in the community

ENGLAND, M.

This paper outlines and explains the approach and operation of the APS Sydney Branch Community Wellbeing Award. This award exists to support community groups to plan and implement projects that encourage psychological wellbeing in the community. The

paper explains the theoretical underpinnings of the award and provides an example of its operation and outcome. The award provides a means of understanding and encouraging measures to promote psychological wellbeing in the community. The value of the award is evidenced by the participation and outcomes shown in the example of its operation provided.

Keywords: *APS Sydney Branch, community wellbeing, mental health promotion*

Psychological wellbeing: United Kingdom and Malaysian fire fighters

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Sources of occupational stress and their impact on job satisfaction and psychological wellbeing were examined in a questionnaire survey of 436 United Kingdom (UK) fire fighters and 617 Malaysian fire fighters. The role of coping strategies and work motivation as moderating factors were also tested. Sources of occupational stress had significant negative correlations with job satisfaction and wellbeing. Hierarchical regression analysis was used to examine the moderating effect of work motivation and coping strategies on job satisfaction and psychological wellbeing and found differences between the UK and Malaysian fire fighters. Models of job satisfaction and psychological wellbeing for both cultures were produced.

Keywords: *stress, well-being, work motivation, job satisfaction, Firefighters*

Psychology into the schoolroom

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The aim is to develop a teacher-training program for Victorian Secondary Schools that will include, in addition to certain school subjects, a 'therapeutic-psychological approach' in the classroom. Whilst the teacher is not designated the role of educational psychologist or sociologist, he will have a background knowledge in this area. The method of applying this psychological approach involves having students co-operating in the development of

learning materials and their own studies. This is likely to include the re-design of methods of learning. Appropriate training is meant to ensure that any interventional involvement of the teacher is not invasive but consultative. In the likelihood of needs of a personal nature arising as formal learning is proceeding, the interaction between the various proponents in the classroom is expected to have a lasting 'therapeutic' effect on the students to cope with 'change'. In conclusion, the Secondary School student of the present and future is entering an age in which professional and vocational ability is insufficient to cope with an ever increasing number of inter-personal and social problems. Developing formal education with a modicum of psychological and social support may offer these students a greater preparation to deal with their immediate environment and sustenance of the greater environment (the world).

Keywords: teacher development, teaching, learning methods, educational psychology, student learning

Psychometric analyses of time perspective in Taiwan

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This study investigated the reliability and cross validity of the Zimbardo Time Perspective Inventory (ZTPI; Zimbardo & Boyd, 1999) in terms of five subscales: Past Negative (PN), Past Positive (PP), Present Hedonistic (PH), Present Fatalistic (PF) and Future (F) in a Taiwanese sample, using both classical and multidimensional Rasch analysis. Participants comprised 420 Taiwanese young adults (278 females and 142 males) recruited from five universities in northern Taiwan. The 56-item Zimbardo Time Perspective Inventory was translated from English into Chinese by the researchers. The approach used for the statistical analysis combined classical and modern psychometric approaches. Classical Test Theory (CTT) analyses were computed using SPSS 12.0 and LISREL 8.54. Multidimensional Item Response Theory (IRT) parameterization was performed using the program ConQuest. The results of applying the initial five-factor model to the data suggested poor fit: $\chi^2(1474) = 3557.25, p < .01$; the Root Mean Squared Error

of Approximation (RMSEA) = .065, the Root Mean Squared Residual (RMR) = .090, the Standardized Root Mean Squared Residual (SRMR) = .090, the Normed Fit Index (NFI) = .65, the Non-Normed Fit Index (NNFI) = .75, the Comparative Fit Index (CFI) = .76, and the Goodness of Fit Index (GFI) = .73. In an alternative model, several items which exhibited weak factor loadings ($< .50$) were eliminated and the path from Past Positive to item 25 was changed as from Past Negative. Compared with the initial model, the alternative model with lower values of $\chi^2(286.92, p < .01)$, RMSEA (.066), RMR (.063), SRMR (.063), and ECVI (.99) and higher values of GFI (.92), CFI (.94), NFI (.91), and NNFI (.93) provides better fit. Besides, the remaining items were taken forward for multidimensional IRT analyses to detect misfit. Fit indices are represented by two forms of the mean square (MNSQ), Outfit (unweighted MNSQ) and Infit (weighted MNSQ). Mean square (MNSQ) ranging from 0.5 to 1.5 is considered acceptable (Linacre, 2009). The fit statistics of all items were near 1.0 and remained within the acceptable range (all MNSQ ranged from .86 to 1.14). This means that the data closely fitted the multidimensional IRT model. According to the results of both classical and modern psychometric approaches, the modified ZTPI-Chinese Version was empirically validated and shown to be a reliable measure in Taiwan.

Keywords: time perspective, Zimbardo Time Perspective Inventory, Chinese, validity, Classical Test Theory

Psychometric properties of the Farsi version of the Multidimensional Inventory for Religious-Spiritual Well-Being (MI RSWB 48)

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Regarding the importance of the role of religious/spiritual factors in the individual's well-being and also the importance of its assessment, this study was carried out to investigate the psychometric properties of the Farsi Version of

the Multidimensional Inventory for Religious-Spiritual Well-Being (MI RSWB 48; Unterrainer, 2007). In this cross-sectional, descriptive, and correlational study, a sample of 320 undergraduate students (204 girls and 116 boys) from Tabriz University were asked to complete the MI RSWB 48, the General Health Questionnaire (GHQ-28), Problem Solving Styles, and Alport's External/Internal Religious Orientation Scale. Data were analysed using Pearson's correlations, t-tests, multiple regression and internal consistency statistical methods. Findings showed high internal consistency ($\alpha = 0.81$) for the total score of the MI RSWB 48 and its factors (0.57 to 0.86). Also, results supported concurrent as well as predictive validity of the Farsi version of the MI RSWB 48. According to the reliability and validity scores reported above, it seems that the MI RWSB 48 has satisfactory psychometric properties in an Iranian university student sample.

Keywords: *Farsi, psychometric, MI RSWB 48, religious, spirituality*

Psychometric studies with the Test for Creative Thinking - Drawing Production (TCT-DP)

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We intend to present some of our studies carried out with Test for Creative Thinking-Drawing Production (TCT – DP; Urban & Jellen, 1996), in a Portuguese sample of college students. This test focuses on a more holistic concept of creativity than the mere quantitatively oriented, traditional divergent thinking tests. We will analyze the psychometric properties of TCT-DP, namely reliability and factorial structure. We also intend to discuss the implications of these results on creativity evaluation. This research includes a convenience sample of 600 participants, 200 from Psychology, 200 from Architecture and 200 from Engineering, 319 male and 282 female, ranging between 20 and 48 years of age. To assess the creativity levels we used the TCT-DP. The factorial structure analysis presents five dimensions that explain 60.58% of total variance (Kaiser-Meyer-Okin = .74; Bartlett's Test of

Sphericity = .000). The Cronbach's alpha coefficient for the total items is .69. The inter-item correlation matrix analysis suggests an important debate about the pertinence of some items for further research. We need to reflect about the pertinence of excluding some of the criteria/items in the adaptation of the TCT-DP for the Portuguese population.

Keywords: *creativity, creativity evaluation, drawing production, creativity, test for creative thinking - drawing production*

Psychosocial risk in Colombian firms of production and services sector

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The aim is identifying psychosocial risk factors in productive sector organizations and health in Colombia. A joint study (qualitative and quantitative) and transactional (descriptive, not parametric) was done. Intentional non-probabilistic sample comprised of 20 companies. Those who make up the sample are persons of both sexes with an age range between 21 and 38 years. We performed the adaptation, validation by judges, pilot testing and implementation of quantitative survey for Identifying Psychosocial Risk Factors prepared by Bocanument and Berja (1993), with the aim of identifying risk factors characteristic present in the population study. Similarly, to categorize the level of hazard risk, the Pre-set levels of risk for psychosocial risk area developed by Duke and Uribe (1999) were used. A questionnaire measuring biopsychosocial factors was used. It was found that the most relevant data driven by the survey of risk identification, are related to the job rotation, are associated with factors related to work organization (excessive working hours, overtime, non-rotating shifts, inadequate planning of work activities by the organization), the content of the tasks to develop, the presence of psychological and physical factors (stress, headaches, anxiety, fatigue and sleep difficulties), and mental burden (simultaneous demands of several tasks in a short period of time, lack of support from the heads, teamwork and under). All these factors were presented in the sample with a medium hazard level. After

the application of the instruments it was found that the above factors affect work dynamics and therefore work climate perceived by workers in the workplace. Contributing to the welfare and health of employees within an organization is very important and necessary in business, because these are the raw materials that can be achieved for the respective functions of all processes, and thereby to meet the proposed goals for this reason it is essential to have a psychological state, physical and emotional stable and perform optimally effective in their work. It is therefore necessary that psychosocial risk is interpreted as warning signs that indicate that workers are in a state of mental and physical discomfort and maintained in that state, the chances of developing a disorder of another kind are substantially increased. Finally it was concluded that psychosocial risk factors affect and are associated with employee turnover, generating self-employment conditions unsuitable for the subject to enhance their performance and productivity within the organization.

Keywords: psychosocial risk factors, organizational performance, organizational productivity, employee turnover, hazard risk

Purpose and passion: Why are organisation mission and values so important for employee engagement?

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Previous research by the authors has demonstrated the powerful impact of organisational purpose on employee engagement, in both commercial and not-for-profit organisations. Despite hypotheses to the contrary, mission and values were just as engaging in both sectors. The current study continues this research by investigating whether the social and ethical value of the organisational purpose moderates the relationship between purpose and engagement, or whether it is mediated through social identity and perception of fit. Organisational climate surveys were completed in 2008 by 3079 employees from 302 predominantly Australian-based, commercial organisations across a wide range of industries. The survey content included the Mission and

Values scale from the Voice Climate Survey (Langford 2009), as well as items measuring Social Responsibility, Philanthropic and Ethical CSR. Employees also rated the extent to which their values and 'personality' matched those of the organisation and other employees in the organisation. Employee Engagement was assessed as an aggregate of job satisfaction, organisational commitment and intention to stay in the organisation (Langford, 2009). Hierarchical regression analyses showed that after belief in the mission and values of the organisation, evaluation of the social and ethical value of that purpose explained little further variance in employee engagement. The interaction between belief in mission and values and evaluation of organisational purpose was not significant. However, perceived organisation-fit was a stronger predictor of employee engagement, and partially mediated the relationship between organisational purpose and employee engagement. Employees' belief in the purpose, mission and values of their organisation is a powerful motivator, particularly driven by employees' sense of fit between their own and the organisation's values. This relationship between purpose and engagement was not affected by the social or ethical value of that purpose.

Keywords: organisational purpose, employee engagement, organisation fit

Putting the horse before the cart: Clarifying the content domain and measurement of employee engagement

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Much is being discussed by researchers and practitioners regarding the antecedents, consequences and practical uses of employee engagement. The content domain of the construct, however, is still unclear, and without further clarity little can be confidently concluded regarding the relationships between engagement and other practices and outcomes. The present study investigated the interrelationship between 12 closely-related constructs that have been previously suggested to represent components of employee engagement. Data was gathered from 1701

employees from 180 organisations. Each employee responded to a randomised set of previously published items measuring the engagement-related constructs of job satisfaction, organisational commitment, intention to stay, vigour, dedication, absorption, positive affect, discretionary effort, organisational citizenship behaviour, proficiency, adaptivity, and proactivity. Exploratory and cross-validated results indicated substantial overlap between many of the *a priori* measures. A single factor explained a large percentage of variance in responses, supporting the previously argued presence of a single overarching construct that could reasonably be labelled as *employee engagement*. Exploring factors with eigenvalues greater than one, a clean two-factor solution was found representing factors of *attitudinal engagement* (encompassing three lower-order factors of organisation commitment, job satisfaction and intention to stay) and *behavioural engagement* (encompassing three lower-order factors of effort, proficiency and proactivity). An 18-item measure of both attitudinal and behavioural engagement, comprising three items for each of the six lower-order factors, was developed and cross-validated against manager-reported organisational outcomes. An even shorter 9-item measure representing only attitudinal engagement showed similar predictive validity as the 18-item measure. The study concludes that the presented factor structure and measure of employee engagement provides both theoretical and statistical rigour to meet the needs of researchers, as well as the brevity and ease of use required by practitioners. It is hoped that the study may contribute to a convergence in the understanding and operationalization of the construct of employee engagement.

Keywords: *employee engagement, job satisfaction, organisational commitment, organisational outcomes, commitment*

Quantitative analysis of client-counselor interaction in psychotherapeutic counseling

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A Client in a psychotherapeutic counseling session benefits from the client-counselor dialogue in that it enhances ability to solve problems, make decisions, and affect desired changes in attitude and behavior. It is expected that an empirical investigation of the process of client-counselor dialogues can contribute to development of dialogue theory, or engineering application. The present study analyzed quantitatively verbal and nonverbal behaviors of a client and a counselor. Four 50-minute counseling sessions were analyzed, of which two were negatively evaluated and two were positively evaluated (high evaluation counseling). In addition, two 50-minute ordinary advice sessions between two high school teachers and the clients from the high evaluation group were analyzed. All sessions represented role-playing. This study analyzed (a) the proportion of total duration of utterance/pause of a client or counselor/teacher to each session. The results indicated that the proportion of total duration of client's pause corresponds to the evaluation of the session, and that temporal change of the proportions in the four counseling cases showed similar temporal pattern. We also analyzed (b) body movement synchrony, through a video analysis of client-counselor/teacher dialogues. The results indicated a correspondence between the degree of body movement synchrony and the evaluation of the session, and a consistent temporal pattern among the four counseling cases. Three judges labeled (c) the counselor's or teacher's turn-taking into (i) utterances with an answer to the speaker's questions at beginning part of the utterance, (ii) utterances with back-channels at beginning part of the utterance, (iii) utterances with laughter at beginning part of the utterance, and (iv) others. The results indicated that occurrence of (i)-(iii) in the two high evaluation counseling cases showed a similar time-series pattern, and that this time-series pattern corresponded to the temporal pattern of body movement synchrony and the proportion of total duration of utterance/pause. The results suggested that these indicators ((a)-(c)) can act as effective indicators of the evaluation of counseling as well as ordinary dialogue. The present study suggested that the professional skills of a counselor, which have been described qualitatively by experts, can be approached by analyzing client-counselor dialogues empirically.

Keywords: *client-counselor dialogue, dialogue theory, problem-solving, decision making, change*

Rasch analysis of depressive symptoms for Aboriginal and general children in Taiwan

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This study used Rasch analysis to examine sex and ethnicity differences on depressive symptoms for children from eastern Taiwan. Subjects were 1189 sixth graders from eastern Taiwan. Thirty percent of subjects were aboriginal children. The Chinese version of the CDI was employed in this study. The reliability of the questionnaire was estimated at 0.87 (which can be similarly interpreted as Cronbach's α). Infit and Outfit MNSQ were ranged between 0.5 and 1.5, indicating that the Rasch model fitted pretty well. Rasch analysis (1960) with Construct-Map software was performed on CDI to examine ethnicity and sex differences. The results were summarized as follows: (1) The Aboriginal girls (-0.0265) reported the most severe depressive symptoms, and the next were the aboriginal boys (-0.07949) and non-aboriginal girls (-0.23848); finally, non-aboriginal boys reported the less severe symptoms; (2) There were no sex and ethnicity differences in the overall patterns of Rasch model. Group and Sex showed non-significant differences in Rasch model; (3) Within item level, ethnicity differences were found in the items such as schoolwork learning and self-determination; (4) Within item level, sex differences were also found in the items such as interpersonal relationship, appetite, negative emotion, appearances, self-determination and lack of interest. This study found that there were no significant sex and ethnicity differences in the overall patterns of the Rasch model. (The melancholy degree is situated between -3 to 1.5). However, within item level, the Aboriginal Children reported higher levels of Depressive Symptoms than non-aboriginal children in the

following items: schoolwork learning and self-determination. Girls reported higher levels of depressive symptoms than boys in the following items: self-perception, emotional intelligence, physical attractiveness, interpersonal

relationship and problem solving ability. Aboriginal girls reported the highest symptoms than the other groups, particularly in negative emotions (e.g. cry, suicide, repugnant of self).

Keywords: *Rasch modeling, depression, Taiwan, Aboriginal, sex differences*

Reaction times to visual cues in the driving environment

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The purpose of this paper is to map the driver's ability to notice and comprehend visual cues in relation to the point of focus at its onset. Ten drivers in a high-fidelity driving simulator drove two 15 km driving blocks through rural and urban traffic and the driver's focal positions were observed and measured at the onset of the visual cue, in which, the time to notice, time to react, and comprehension time were studied to see what type of correlation there was between focal distance and location in the vehicle. Results showed that the visual cues found in the lateral field of view were noticed quicker than in the horizontal which agrees with earlier literature. In more demanding driving situations, e. g. high traffic load in town, are drivers less likely to notice visual cues that are commonly found in the instrument cluster. In conclusion, should visual cues be implemented so that they can be presented adaptively, in accordance to the driving situation. That is, the information can be more effective if intelligently shown to the driver in ways that take into consideration the driving condition and how it relates to the driving situation, thus, helping the driver respond to the information intuitively so that the risk for distraction is minimized.

Keywords: *driving simulation, visual cues, focal distance, driving situations*

Reasons and functions of creative crisis

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In spite of its severity, creative crisis isn't just a negative phenomenon, it has a range of positive functions and becomes an important stage in

the creator's personality development. The study sample ($N = 75$) comprised art school students, art school graduates no longer working in the arts, and people established as artists (actors, writers, musicians etc). Participants were interviewed, administered the Rokeach Value Survey (RVS), and were provided with the Symbol of Creativity technique and a modified version of the Life-line technique. The art school students and those established as artists ranked creativity high in the RVS. They demonstrated wide range of creativity interpretations, from specialised professional meaning to general universe fundamentals. Almost all participants, including students, reported that they had experienced creative crisis. The analysis of early childhood events related to creativity specified some preconditions of later creative crises. Participants noted the following reasons for creative crisis: lost sense of creativity, "genre crisis", loss of creative self, inability to cope with hard life situations, lack of understanding and support from others, etc. In line with our hypothesis, participants noted both negative and positive aspects of creative crises. Positive functions identified include signal, diagnostic, developmental, protective and creative. Positive perception of creative crisis is connected mostly with an understanding of its positive functions. Negative perception depends on subjective evaluation of its possible consequences (including distant ones) and on individual experiencing of emotion. Self-esteem plays an important role in the subjective perception of creative crisis because according to participants, it is easily damaged by crisis. The study results reveal the importance of developing adequate techniques of psychotherapeutic help to people experiencing creative crisis and identify what will help to decrease the amount of psychological breakdowns among representatives of creative professions.

Keywords: *creative crisis, creativity interpretations, self-esteem*

Reducing collusion with individualism in counselling: Disclosing student's stories for individual, family, and school benefits

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This presentation focuses on the issue of how to maintain confidentiality in the counselling setting while avoiding collusion with individualism. The aim is to create conversations about this dilemma with other practitioners as well as outlining feedback from high school students that have entered into counselling. Theory informing confidentiality and disclosure arguments will be discussed, and practical tips given on how to share young people's stories in school settings for both individual and community benefits. Qualitative data was collated via focus groups ($n = 42$) and individual interviews ($n = 10$). Young men ($n = 25$) and young women ($n = 27$) aged between 16 and 18, and from a range of cultural backgrounds, participated in a number of interviews at two Melbourne high schools. Open and closed questions were used in the semi-structured interviews. The oral answers were recorded in a written format. Overall, 48 out of 52 participants stated that they would partly disclose their stories if they viewed it would benefit others. The remaining four participants indicated that they would fully disclose their stories including their identities. All 52 participants said they would like to collaborate in choosing the disclosed information and how it would be disclosed. The participants gave several tips on how their stories could be shared with others, including: professional development to teachers and students, newsletters, posters and multi-media sites. The results also include several quotes from the participants. In conclusion, the findings from the focus groups and individual interviews suggests that the majority of students were willing to partly disclose their stories explored in counselling, especially if it benefited individuals, families and schools. Other schools are encouraged to generate similar discussions to explore how they may be able to reduce collusion with individualism in counselling while honouring confidentiality.

Keywords: *disclosure in counselling, collusion with individualism, students, confidentiality, sharing stories*

Relation between self perceived employability and career exploration of Chinese University students in Hong Kong

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Self perceived employability of university students attracts the attention of academics and practitioners alike. Building on the work of Rothwell, Herbert and Rothwell (2008) on a scale assessing the self-perceived employability of university students in England and current career exploration research (e.g. Flum & Blustein, 2000), this study aims at exploring the relation between self perceived employability and prior career exploration in the Hong Kong context. A cross sectional quantitative design is adopted. The research aims at obtaining a sample of over 600 final year students from three local universities in Hong Kong, drawn from different academic disciplines like business, social sciences, and engineering. They will be asked to fill in a set of questionnaires which consist of the self perceived employability scale, career exploration survey (Stumpf et al., 1983), as well as demographic variables. Scales have been translated and adapted to use in a Hong Kong/Chinese context. The reliability and validity of the scales of self perceived employability and career exploration as applied to the Hong Kong sample will be presented. Through multiple regressions, the extent to which self perceived employability is explained by prior career exploration for the last months, after blocks of demographic and educational factors are controlled for, will also be analyzed. Conclusions will be made on the extent of prior career exploration as an antecedent of self perceived employability of Chinese University students in the Hong Kong context as compared to other individuals and educational variables, with reference to the local employment situation. Implications on both theory building and career guidance related to employability of university students will be analyzed. Further research on employability of university students in Chinese societies will be suggested.

Keywords: employability perception, career exploration, career exploration, employment, career guidance

Relations between job-related anxiety and job satisfaction according to basic personality traits

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This study examined the relationship between job-related anxiety and overall job satisfaction from the perspectives of three distinct approaches to well being: 'bottom-up', 'top-down', and 'transactional'. The latter model is boosted with elements of greatest significance of the aforementioned two approaches. The models of these relationships, postulated in three theories, were verified in two studies. In each study the level of overall job satisfaction (Work Description Inventory), situational job-related anxiety (4 items from Job Affect Scale) and persistent job-related anxiety (Mood at Workplace Questionnaire) were investigated among 240 employees (120 males). Additionally, neuroticism and extraversion (NEO-FFI) were measured in the first study and in the second study emotional reactivity and activity (Formal Characteristics of Behavior – Temperament Inventory) were also measured. Analyses done from the perspective of 'bottom-up' theories showed that two forms of job-related anxiety were negatively correlated with overall job satisfaction in both studies. Data analysed from the perspective of the 'top-down' model demonstrated that neuroticism and emotional reactivity affected job-related anxiety and job satisfaction. Moreover, persistent job-related anxiety mediated the relationship between neuroticism or emotional reactivity and overall job satisfaction. However, situational anxiety was a mediator only between reactivity and job satisfaction. Data analyses within the transactional model indicated that overall job satisfaction depended on a second order interaction between job-related anxiety and two considered individual characteristics in both studies (namely neuroticism and extraversion or emotional reactivity and activity). These studies have made an important contribution to the well-being literature by revealing the possible methodological problems and measurement artefacts of 'bottom-up' and 'top-down' approaches. In addition, they provided evidence supporting the adaptive role of anxiety and individual properties as its moderators.

Keywords: job-related anxiety, job satisfaction, bottom-up, top-down, transactional

Relations of quality of attachment with anxiety and depression in college students

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GHOBARI BONAB, B. (University of Tehran)

The aim of the present study was to investigate the relationship between quality of attachment with anxiety and depression in Tehran medical sciences and Iranian medical science universities. To accomplish the stated goal, 513 students from Tehran Medical Sciences University and Iranian Medical Sciences University were selected by means of proportional sampling procedure. Adult Attachment Scale (Collins, 1996) and Symptom Checklist-90R (Derogatis, 1973) were utilized for data collection. Analysis of data with utilization of multiple regression revealed that anxiety and depression of college students can be predicted from the magnitude of their quality of attachment. Moreover, data revealed that students with anxious attachment were higher in depression and anxiety than individuals with a secure attachment style. Individuals who could depend on their partners and find them available were lower in anxiety and depression. The authors concluded that insecure adult attachment was associated with anxiety and depression.

Keywords: quality of attachment, anxiety, depression, Adult Attachment Scale, Symptom Checklist 90-Revised

Relationship between alexithymia and coping strategies in stressful situations

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Coping strategies are used to manage conflict and illness and can have adaptive or maladaptive effects on health status. The typical features of alexithymia include difficulty with identifying and describing feelings, difficulty with distinguishing feelings from bodily sensations of emotional arousal, a constricted fantasy life and an externally oriented cognitive style. There is controversy in the literature as to whether

alexithymia reflects a deficit in the cognitive processing of emotions or a defensive coping style. Previous studies with clinical populations reported a strong association between alexithymia and a maladaptive (immature) ego defense style. The objective of the present study is to examine the relationship between alexithymia and coping strategies (three general and two sub-styles) to cope with stressful situations in a group of non-clinical populations students. The study sample consisted of 200 participants aged between 19 and 21 years enrolled in the academic year of 2008 to 2009 in Tarbiat Moalem University of Azarbayjan in Iran. The Toronto Alexithymia Scale (TAS-20) was used to measure alexithymia, along with the 48-item Coping Inventory (Endler & Parker, 1990), to measure coping strategies in stressful events. The results reveal the significant difference between females' and males' coping strategies, and suggest that self-rated alexithymia and adaptive coping strategies are generally inversely related.

Keywords: alexithymia, coping strategies, stressful situations, gender differences, emotional processing

Relationship between attachment styles and sexual behaviors in adults

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The aim of the current study was to collect and analyze published studies related to attachment and sexual behaviors. In the current study, relevant articles in the field of psychology in relation to attachment and sexual behaviors have been reviewed. The sample consisted of 27 electronic sites in the field of psychology which were reviewed. Meta-analysis was used to summarize the results of the review. The results of the current meta-analysis revealed that individuals with an insecure attachment are not exhibiting functional sexual behaviors, and they are not getting satisfaction from their own behaviors. Moreover, individuals who have been abused sexually during their childhood, have insecure attachment styles. These individuals feel low in self worth, and have lost their trust in others as an available, responsive, and responsible attachment figures. Review of the literature in the field of attachment revealed

that individuals with anxious and avoidant attachment styles demonstrate specific patterns of sexual motives and behaviors. Individuals with an anxious style use their sexual behaviors as an instrument to get acceptance, affection and security. Unfortunately, these motives make individuals vulnerable to deviant and dysfunctional sexual behaviors. These tactics backfire most of the time by damaging intimacy in sexual relations, promoting mental dissatisfaction, and causing psychological divorce in the long run. Individuals with an avoidant approach show problems in commitment and maintaining an intimate relationship with their partners. Their discomfort with functional social relations with others may lead them to dysfunctional sexual behaviors including masturbation and self stimulation. In contrast, individuals with secure styles tend to show functional and satisfactory relations with the partners. Their sexual behavior is enhancing their satisfaction, intimacy and commitment.

Keywords: attachment style, marital satisfaction, sexual behaviour, intimacy, affection in relationships

Relationship between Chinese workers' work values and their attitudes toward marriage and childbirth

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The purpose of this study is to examine the relationship between Chinese worker's work value and their attitude toward marriage and childbirth. Chinese people traditionally cherish marriage and childbirth. However, many young workers in China and Taiwan tend to reject marriage and childbirth, which is having a strong social and financial impact on these countries with growing ageing populations. It is hypothesized that those who hold non-traditional marriage and childbirth attitudes should emphasize individual oriented work values more and emphasize social oriented work values less, than those who have traditional marriage and childbirth attitudes. Based on Young's Bicultural Self Theory, the authors developed Chinese indigenous work end value, and instrumental value, scales and surveyed 1031 Chinese and Taiwanese urban workers.

Respondents were clustered into traditional or non-traditional marriage and childbirth believers based on cluster analysis of their responses to three questions about intentions of keeping single, cohabiting without marriage and marriage without children. A discriminant analysis suggested that male traditional marriage and childbirth believers emphasized competition, aggression, safety and security more, and emphasized autonomy and flexibility work values less, than male non-traditional marriage and childbirth believers. Female traditional marriage and childbirth believers put less emphasis on self-competence, autonomy, flexibility, acceptance of the mandate of heaven, responsibility and discipline, but put more emphasis on social respect, competition, aggression, forgiveness and humble work values. Results support the hypothesis. Workers who have more individual oriented work values tend to hold non-traditional marriage and childbirth attitude. Those who put more emphasis on social oriented work values tend to have traditional marriage and childbirth attitudes.

Keywords: work values, marriage, traditional versus non-traditional values, individual-oriented values, social-oriented values

Relationship between home environment and self-derogation among higher secondary school students: A study in a developing country

GEORGE, S. (Monash University)

The focus of the study is the relationship between home environment dimensions and self-derogation among adolescents in India. Results were derived from a survey with 400 Grade 11 students from ten secondary schools in Kerala state, India. The proportionate random sampling technique was followed to select the sample, which consisted of three pairs of subsamples: male-female, rural-urban, and government-private school. Self-derogation data were collected by administering an established scale (Raj, 1991). A 50-item questionnaire was developed to collect data regarding four dimensions of home environment: material facility, parental attitude, study habits, and family relations. Pearson correlations measured relationships at the whole sample and

subsample levels. Further tests of significance of difference were adopted to test whether correlations were significantly different among the three pairs of subsamples. The study revealed a high negative correlation between home environment overall, and self-derogation, within the whole sample. The correlation analyses involving the four dimensional components of home environment established negative substantial relationships between self-derogation and each of study habits, parental attitude and family relations; but a low, negligible relationship with material facility. The strengths of these correlations were significantly different within the full sample. Correlation coefficients significantly differed between male-female subsamples with girls showing stronger relationships of self-derogation with home environment. Although boys showed a negative substantial correlation ($r = -.50$), the other subsamples showed significantly stronger negative correlations (range, $r = -.87$ to $-.92$). Correlations also differed significantly between rural-urban subsamples with urban students showing stronger correlations, but there were no significant differences in correlations between the private-government subsamples. The study establishes that self-derogation, which is detrimental to effective development, is associated largely with unfavourable home environment dimensions relating to parental attitudes, family relations, and study habits; but not to material facility. It reveals that emotionally congenial family interactions and a cognitively stimulating environment are essential for healthy overall development of a positive self-concept during adolescence.

Keywords: *home environment, self-derogation, family relations, adolescent development, parental attitudes*

Relationship between procrastination and counterfactual thinking: Achievement motivation as mediator

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Procrastination appears cause difficulty because sometimes it results in poor performance and reduced physical/mental health. The present

study investigates the relationship between procrastination and its related factors. The study will provide a theoretical basis and empirical support for correcting procrastination behavior of students. The experimentation and questionnaire are used on 234 university students. The results indicate that individuals who use downward contrast counterfactual thinking feel more relaxed, and those with upward assimilation counterfactual thinking feel more anxiety. Different counterfactual thinking has different effects on procrastination. Furthermore, achievement motivation affects the influence of counterfactual thinking on procrastination. From the study, it is concluded that counterfactual thinking can influence procrastination. Achievement motivation mediates the relationship between counterfactual thinking and procrastination.

Keywords: *procrastination, counterfactual thinking, achievement motivation, poor performance*

Relationship between sexual function and marital adjustment in married women and their husbands

ALIAKBARI DEHKORDI, M. (Payame Noor University)

The aim of present research is to identify the relationship between sexual function with marital adjustment in married women and their husbands. For most of adults, happiness in life is more dependent on successful marriage and satisfactory marital relations than life's other aspects. Desiring sex that can provide extreme satisfaction will have an important and fundamental role in success and constancy of family foundation. By identifying sexual function and its components can result in sexual satisfaction and ultimately marital satisfaction that has important effects on a couple's adjustment. In this research, 60 couples that were resident in Tarbiat Modarres University's married dormitory were selected by random sampling. The necessary information was collected by a questionnaire of women's sexual function (FSFI; Rozen, 2000) and a marital adjustment questionnaire (Spainer, 1976). These two tests have high reliability and validity. To analyze data statistically, Pearson's correlation coefficient and multivariate regression were

employed. The findings are that there is a significant positive correlation between women's sexual function and its components with women and their husbands marital adjustment. Also, women's sexual function components explain 25% of their marital adjustment variance and 34% of their husband's marital adjustment variance. In conclusion, in regard to the results of the research that sexual function has role in predicting marital adjustment, it seems that by paying attention to women's sexual function quality, providing correct information, necessary training and enhancing the rate of women sexual function, we can help to their life constancy and marital adjustment.

Keywords: *marital adjustment, married women, sexual function, life constancy*

Relationships between quality of life, self-efficacy, self-esteem, food craving, mood and weight-loss in an older obese population

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In Australia, the greatest increase in obesity has occurred in the 55 to 64 age group. Obesity is directly related to several health issues and costs an estimated \$21 billion per year. Also, it has been identified as a national health priority. This study examines psychological issues influencing weight loss in an older obese population and aims to evaluate the efficacy of a short-term multi-disciplinary weight loss program. Participants were recruited through a private rehabilitation centre and were required to have a Body Mass Index greater than 30, aged 50 years or over, be medically stable, well enough to exercise, and not participating in another weight loss program. Three groups participated: (1) a treatment seeking group, (2) a non-treatment seeking control group, and (3) a waiting list control group. Psychological influences on weight loss were assessed with the Obesity-Related Well Being Questionnaire, Weight Efficacy Life-Style Questionnaire, Food Craving Experience Questionnaire, Rosenberg's Self-Esteem Questionnaire, and the Depression Anxiety Stress Scale. Each group completed the battery and was weighed initially and six weeks

later. The treatment group was also tested at three, six and twelve months. The treatment group participated in a six week structured group program, meeting weekly with psychologists, dietitians, exercise physiologists, occupational therapists, and physiotherapists. The psychology component followed a cognitive-behavioural therapy model, aiming to deliver education and training in several areas relevant to obtaining and maintaining weight-loss. Data collection for this project is currently in progress. Collection will be finalised and data analysed before July 2010.

Keywords: *weight loss, body mass index, self-esteem, obesity, food craving*

Relevance of assessment centres in competency assessment and importance of handling post-assessment data

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Competencies are statements about the characteristics that result in effective, superior performance in a job. Competencies are vital for understanding human potential and hence assessing them becomes important. Assessment Centres have been widely used for assessing competencies which are identified by an organization, and research shows that although predictive coefficients of Assessment Centres are generally high, some Assessment Centres have low predictive validity. In fact the observed validity coefficients of Assessment Centres reviewed in one research ranged from -.25 to +.78 (Gaugler, Rosenthal, Thornton & Bentson, 1987). These kinds of results affect their usage by practitioners. This research is aimed at answering two questions including (1) Are Assessment Centres essential for assessing Competencies, given their high cost factor? Can competencies be assessed by other methods or combinations of a few methods for cost-effective results? (2) If Assessment Centres are essential then how can they be made more valid and effective so that greater number of organizations can benefit from them? This paper carries out a critical analysis of the relevance of Assessment Centres by interviewing professionals in a number of organizations who are responsible for Assessment Centre

initiatives. An attempt is made to arrive at a realistic picture of how much Assessment Centres are being used in India by Indian and Multinational organizations and whether the high costs involved justify their use. Results support the general research conclusion that Assessment Centres are highly effective tools of assessment but require careful implementation of the processes. Considerable care and attention should be given to how the results will be used and how the results will not be used. Proper handling of post-assessment data is very critical and can go a long way in creating job-related, fair and legally defensible Assessment Centre programs. Final conclusions are yet to be drawn as interviews are still being conducted.

Keywords: competence, assessment centres, human potential, competency assessment

Religious Community Mass Syndrome (RCMS) Huj And Simhastha: Demographic and attribution analysis

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Community Mass Syndrome (CMS) was first reported in the fifteenth century as "Tarantism" in the context of normal behavior in Germany and, in the rest of Europe, it was known as "St. Vitus's dance". It was similar to the ancient orgiastic rites used to worship the Greek God Dionysus. The Lady Guadalupe Festival has been celebrated since 1531 in Mexico where millions of people participate in religious mass, discussion, music, dance, parties and relaxing. The Feast of Fools was a very popular medieval celebration for Roman Catholics. It was not categorized under mass psychogenic illness. Community Mass Syndrome is being interpreted as normal behaviour where hundreds to millions of people of more or less the same community are motivated towards a certain type of behaviour acceptable in society with one, or more than one, common goal (Singh, 2005). One of the types of CMS is Religious Community Mass Syndrome. The aim of the present study is to investigate the difference between demographic structure (age and gender) and attributions among the participants of Huj and Simhastha Religious Community Mass syndrome. The Simhastha has a history of eight hundred

years of participants including pilgrims, devotees and participants from various communities assemble. In Huj, since 12th century, hundreds to thousands of Muslim pilgrims have participated in Mecca in Saudi Arabia, the gigantic celebration of faith. The present study involves 200 participants (100 male and 100 female), stratified randomly selected using a two-by-two design of gender (male/female) and age (of three age groups 20-plus, 30-plus and 50-plus), from India and who participated in Simhastha and Huj, in order to find out the effect of gender and age group on attribution. A questionnaire was prepared to assess the attributions. The first part of study focuses on gender and age and the second on type of attributions behind mass syndrome. The results are based on an analysis of variance and qualitative analysis and reflect the difference between age, sex and state and trait attributions between the sample of Huj (Muslim) and Simhastha (Hindu) Religious Community Mass Syndrome. There was a difference amongst the participants' demographic picture and attributions of RCMS of Huj (Muslim) and Simhastha (Hindu) participants.

Keywords: religious behaviour, community mass syndrome, trait attributions behind mass syndrome, celebrations of faith, Indian community celebrations

Reports of wins and risk taking: An investigation of the mediating effect of the illusion of control

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Two experiments examined the relationships between the knowledge that another person has won in a gamble, the illusion of control and risk taking. The first study thus aims to test a causal model where the illusion of control is a mediator of the effect of reports of others' wins on one's risk-taking behavior. The second experiment examined what motivated the increase in participants' personal illusion of control when they knew the gain of another player. In a first study, 24 participants, randomly assigned to one of two groups and played a computer-simulated French roulette game individually. In the experimental group, participants were informed of the amount won by the previous winner. In the control group, this information was omitted.

In a second study, 36 participants were randomly assigned one of three groups. The first experimental group and the control group were identical to the groups in Experiment 1. In a second experimental group, participants were still told of another person winning but, in addition, they were informed that this person acknowledged that her win was fortuitous. Results from the first experiment validated a causal model where the knowledge of another person's gain increases the illusion of control, measured with betting times, expectancy and self-reports on scales, which in turn encourages risk taking. Results from the second experiment confirmed that the increase in risk taking observed upon learning that another player had won in a gamble was contingent on the belief that this previous winner controlled the outcome of the gamble like in a skilled task. Reports of wins are interpreted as a skill-related cue. When participants thought that the previous winner did not control the outcome of his gamble, the knowledge of his gains no longer increased participants' risk taking. Mediation analyses replicated results observed in the first experiment. Thus, Experiment 2 demonstrated that it is the belief that the previous winner could exert control over the outcome of the gamble that presumably led participants to experience higher levels of illusion of control and take higher risks when gambling in the knowledge that the previous gambler had won.

Keywords: *gambling, risk taking, illusion of control*

Research on the impact of communication openness to organizational commitment based on superior-subordinate relationships

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This research is established in Chinese settings and, by measuring a sample of 315 employees from Chinese enterprises, it attempts to examine the impacts of communication openness on organizational commitment and the mediating effects of leader-member exchange and Guanxi in this process. Also, we explored the impacts of age, education, position

level on these variables. We applied Simple Random Sampling by random sampling and sending questionnaires via e-mail to improve recovery of our questionnaires. Measurements applied in this study are from western researchers' literature or developed in the Chinese context as follows: Communication Openness Measure Scale, developed by Rogers (1987,) for Communication Openness; JOM scale, developed by Liden & Maslyn (1998), for Leader-member Exchange (LMX); Guanxi with Supervisor Scale, developed by Kenny Law (2001), for Guanxi; and, an 8-item scale by Meyer & Allen (1997), for Organizational Commitment (OC). The above variables are measured by a 5-point Likert scale ranging from 1 = "strongly disagree" to 5 = "strongly agree". Statistical methods in this paper mainly include: Reliability and Correlation Analysis and Regression analysis. The main findings are showed as follows: firstly, communication openness is significantly related to LMX, Guanxi and organizational commitment; secondly, Guanxi fully mediates the relationship between communication openness and organizational commitment; and, thirdly, LMX doesn't mediate the relationship between communication openness and organizational commitment directly. This research finds that personal Guanxi between supervisor and subordinate plays an important role in Chinese enterprises. The suggestions for Chinese enterprises from the result are as follows: Chinese enterprises should build effective formal communication networks to ensure that any information can be transmitted without obstacles; and, supervisors should be more open to subordinates, especially in strengthening the initiative of communication. In addition to formal LMX, supervisors need to keep good personal Guanxi with subordinates and spend time showing care to them, in order to win subordinates' commitment and increase employees' organizational commitment.

Keywords: *Chinese enterprises, leader-member exchange, communication networks, employee organizational commitment, superior-subordinate exchange*

Risk and resilience for mental health problems in childhood and early adolescence: Evaluation of a risk screening tool

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This study investigated the psychometric properties of the Darebin Risk Assessment Screening Tool (DRAST), a newly developed screening tool designed to assist teachers in identifying students who may be at risk for developing social, emotional and behavioural problems. The DRAST covers both risk and protective factors. The primary aim of this study was to establish reliability and validity to support the use of the DRAST within schools. The sample consisted of 206 students in grades one to six, recruited from primary schools in a Northern metropolitan Melbourne schools network. For 147 students, data consisted of pre-existing anonymous DRAST screening assessments only. For the remaining 59 students, parents completed a demographic questionnaire and the Strengths and Difficulties Questionnaire (SDQ) for their child and classroom teachers completed the DRAST, SDQ and Student Behavior Survey (SBS). Principal component analyses revealed a four factor structure for both risk items and protective items, with adequate reliability observed for the total risk and protective scores, and for most of the newly derived factors. Significant relationships were found between the DRAST factors and parent and teacher ratings of problems, adjustment and resources. Protective factors were found to be more significant predictors of problems or adjustment than risk factors. Overall, the results indicate that the DRAST is a reliable and valid screening tool, as the total risk and protective scores were found to be adequate for identifying students at risk for developing problems. However more refinement of the tool is needed, especially for risk factors. Future research with a larger sample is needed to examine additional psychometric properties such as test-retest and inter-rater reliability and to develop normative data.

Keywords: risk factors, resilience, risk assessment, children's mental health, adolescent mental health

Risk taking behaviors in adolescence: Different psychological profiles

Over the past few years, prevalence of risk-taking behaviors has not remarkably increased but new dangerous practices seem to have emerged among adolescents in France (for example, asphyxial games, binge drinking). Several researches considered individual factors leading adolescents to seek risky situations. However, few of them came to distinguish profiles of risk-taking depending on the type of declared dangerous practices. The objectives were to distinguish different risk-taking profiles among adolescents and specify involved individual features (personality, perceived stress, coping strategies) in each profile. Two hundred and seventy six middle and high school students, aged between 12 and 16, participated. Self-assessment included an Exploratory Questionnaire on risk-taking behaviors, Junior Temperament and Character Inventory (Luby, 1999), Coping Across Situation Questionnaire (Seiffge-Krenke et al., 2008), Children Depression Inventory for Children (Kovack & Beck, 1977), and the State Trait Anxiety Inventory for Children (Spielberger, 1983). Preliminary results underline three profiles of risk-taking. Of the adolescents, 26.1% reported at least one antisocial behavior, 31.2% declared at least one antisocial behavior and at least one substance use behavior and 10.5% reported at least one antisocial behavior associated with at least one substance use behavior and one dangerous game. High depressive and anxious symptomatology, high novelty-seeking, use of avoidant coping strategies as well as low individual and social maturity were associated with adolescents engaging several forms of risk-taking behaviors. Likewise in regards to Jessor's General Syndrome of Deviance, this study shows that selected individual factors might be indicators of a general syndrome of risk-taking. Adolescents presenting this kind of psychological functioning would be more likely to seek risky situations in several fields in their life. These results would help to define well-focused preventive strategies.

Keywords: adolescents, risk taking, avoidance, antisocial behaviour

Road-rail level crossings: Expectations and behaviour

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Road-rail level crossings are a dangerous point in the rail network, as the relatively controlled environment of the railway is opened to the unpredictable behaviour of road users. One potentially dangerous interaction is a mismatch between the warning signals provided, and road users' expectations of warnings. Little is known about how road users expect crossing signals to behave, particularly when the crossing controls do not work as anticipated. The behaviour of 52 road users was examined in a driving simulator experiment. Participants performed several drives containing four railway crossings, including one in which the crossing warning signals did not perform as expected. After the drives, participants were interviewed about their behavior in the experiment, and when driving in the real world. Participants' expectations of the warning times provided by railway crossing signals were generally in accord with standard practice warning times. The appearance of an alternative warning system was generally well understood, and may offer safety benefits as judged by participants' predicted behavior. However, participants' descriptions of how they would behave at crossing with malfunctioning signals did not match their behavior when they encountered this situation in the simulation. There is scope to improve the information provided to road users at road-rail level crossings, and their understanding of the behaviour required of them.

Keywords: road-rail level crossings, unpredictable driving behaviour, railway crossing signal warning times, driving simulation, road users

Role of empowerment on self-efficacy and organizational effectiveness in South Korean organizations

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Empowerment, defined as providing employees with autonomy in tasks, positively influences job satisfaction and organizational effectiveness (Spreitzer, 1999). Thus many companies have tried to systemize empowerment. However, empowerment may not always have positive outcomes if it does not promote the employee's belief that they are capable of performing adequately to attain goals (i.e. self-efficacy). Additionally, empowerment may be influenced by the effects of organizational characteristics, such as the level of hierarchical structures and bureaucracy in which employees may not experience the positive effects of empowerment due to the lack of latitude in their role within the organization. It was thought that public organizations would be most subject to such effects, followed by large, then medium-sized, organizations and that the positive effects of empowerment would be most apparent in medium-sized organizations. This research aims to see whether self-efficacy would mediate the relationship between empowerment and organizational effectiveness, and between empowerment and job satisfaction, and whether these mediation effects would differ by organization type. Two-hundred and seventy nine employees (96 from medium-sized, 60 from large, and 123 from public organizations) participated in the survey. They reported on empowerment, self-efficacy, job satisfaction, and organizational effectiveness variables (i.e. organizational commitment, organizational citizenship behavior and innovative behavior). Self-efficacy fully mediated the relationship between empowerment and job satisfaction, and between empowerment and organizational effectiveness in both medium-sized and large organizations, but partially mediated in the public organization. Analysis of the moderating effect of organizational type revealed that, compared to public organizations, the indirect effect of empowerment on job-satisfaction and organizational effectiveness was stronger and more positive in medium-sized organizations. The large organization did not show significantly different relationships compared to the other organizations. Data showed that self-efficacy was a mediator of the relationships between empowerment and job satisfaction, and between empowerment and organizational effectiveness variables. Also, increasing empowerment in medium-sized organizations

may influence organizational effectiveness and job satisfaction to a greater extent than in public organizations. Therefore, organizations may need to deliberate the level of empowerment given to employees in light of the resulting effects on self-efficacy and the characteristics of the organizational structure.

Keywords: *empowerment, job satisfaction, organisational effectiveness, organisational culture, self-efficacy*

Rumination and depression: The effects of a depression attention control training program on reducing rumination and depression

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The goals of this research were to investigate: (a) the relationships among rumination, anxiety, and depression in a sample of Iranian students, (b) the relationships between negative attentional bias with depression and rumination; and (c) the efficacy of a Depression Attention Control Training Program (DACTP) on reducing negative attentional bias, rumination, and depression. The research included three studies. In the first study, participants ($N = 119$; 37% male) completed Beck Depression Inventory-II (BDI-II), Ruminative Response Scale (RRS) and Beck Anxiety Inventory (BAI). In the second study, participants ($N = 52$; 20% male) completed the BDI-II, RRS, BAI and Depression-Stroop Test. In the third study, participants ($N = 16$; 100% female) from the previous study who obtained the highest scores on both rumination and depression were randomly allocated to a training (experimental) or a control group. The experimental group received four sessions of training with the DACTP. All participants completed the BDI-II, RRS and Depression Stroop Test at pre- post-training and a 70-day follow-up. From the first study, the results of a hierarchical regression analysis indicated that, after controlling for age, gender, and anxiety, increases in rumination were associated with increases in depression. From the second study, the results indicated that, (a) compared to non-depressed participants, depressed participants showed less attentional bias for positive- and

concern-related stimuli; (b) negative attentional bias was positively related to depression, but the relationship was limited to depressed females; (c) positive- and concern-related attentional bias were negatively related to depression and rumination; and (d) increases in negative attentional bias were associated with increases in rumination, even after age, gender, education, classic Stroop test, anxiety, and depression had been controlled. From the third study, the results indicated that participants in the DACTP group showed reductions in post-training negative attentional bias and rumination (reductions in depression approached significance; $p = .06$). The findings support the role of attentional bias in rumination and depression and suggest the feasibility and benefits of depression attention control training in reducing rumination and depressive mood.

Keywords: *Rumination, Depression, Depression attentional control training, Beck Depression Inventory, Anxiety*

Rumination and gender differences in depression (response style approach)

JANATIAN, S. (University of Isfahan), YOUSEFI, Z., JANATIAN

The purpose of this study was to examine the etiology of the difference between males and females in the prevalence of depression among students at the University of Isfahan. The statistical population was all students at the University of Isfahan. The sample consisted of 100 students (60 females and 40 males) that were randomly selected from all the campuses who all responded to a depression scale. The results of variance analysis showed that there were not any differences in problem solving and rumination between female and male students but there was a significant difference between females and males in distraction ($p < 0.05$). From the results, it can be concluded that females could experience more depression than males. It seems while doing problem solving, they do rumination, and that is the reason they experience more depression than male students.

Keywords: *depression, gender differences, distraction, rumination, problem-solving*

Safety climate in the construction industry – Interaction and influence of levels of climate in a dynamic industry

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The concepts of safety climate and culture are now applied extensively within many industries to explain risk taking behavior. Therefore, the development of a strong positive safety culture is a goal for many organizations. However, such a goal may be problematic within a dynamic construction industry where employees and site of work can change frequently. In an attempt to address this potential problem, this research aims to elucidate the complex nature of safety climate within the construction industry and see how an interaction between climates and hazard exposure can influence safety behavior and workplace accidents. Questionnaires were completed by employees of a large company within the construction industry. The questionnaire used a number of established and specifically developed scales to assess the influence of various levels of climate and hazard exposure on safety behavior and workplace accidents. The questionnaire was sent to 2250 employees. Responses were obtained from 983 employees, a response rate of 43.7 %. The scales were subjected to confirmatory factor analysis, before modeling the relationships between variables using Structural Equation Modeling. A model was developed demonstrating the influences of different climates and hazard exposure on worker risk taking behavior. The model proposes that organizational climate and professional climate, influence coworker climate (colleagues and supervisors) and this, in turn, influences the risk taking behavior of workers. This model explains 45 % of the variance in individual risk taking behavior. Construction industry safety climate is a complex, fragmented phenomenon. Worker behavior is influenced by a number of climates within the workplace, with organizational climate, co-worker climate and professional climate all influencing risk taking behavior. The findings have implications for organizations trying to manage both climate and risk taking behavior; the construction environment provides more of a challenge than more stable workplaces. By understanding the influence of

different cultures in this sector, organizations will be more able to influence and manage them.

Keywords: *safety, construction industry, work environment, risk taking, organisational climate*

Season of birth and mood seasonality

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Previous research has shown that mood seasonality is modulated by season of birth (Natale, Adan, & Chotai, 2007). Italian and Spanish individuals born during spring or summer had significantly higher mood seasonality than people born during autumn or winter. Significant gender differences were also observed, with female participants showing higher mood seasonality than males. The present paper reports preliminary data investigating the robustness of these findings by considering New Zealand participants, who live in a different hemisphere and experience different seasonal patterns than participants from previous studies. A study was conducted with 636 New Zealand-born participants with ages ranging from 18 to 30 years old ($M = 22$ years, $SD = 3.6$; 68.7% female), who completed the Seasonal Pattern Assessment Questionnaire (Rosenthal et al., 1984), plus socio-demographic questions. A two-way ANOVA was conducted to examine the effects of month of birth and gender on mood seasonality, with age entered as a covariate. A significant effect of gender was observed ($F(1, 597) = 43.6, p < .001$), with females scoring higher than males. A marginally significant effect of month of birth was also observed ($F(11, 597) = 1.71, p < .07$), with mood seasonality being higher for those born in August (winter) than in February (summer). No significant interaction was found between month of birth and gender. In line with Natale et al.'s (2007) findings, we observed a significant main effect for gender, indicating that women experience greater mood seasonality than men. In contrast, these preliminary results showed only a marginally significant main effect for month of birth on mood seasonality, and New Zealand participants born during a winter month had significantly higher mood seasonality than

those born during a summer month. This reverse pattern of findings may be due to differences in climate features in New Zealand, such as different hemisphere, rain and wind patterns. Additional studies with larger samples from the southern hemisphere are necessary to fully understand the influence of season of birth on mood seasonality.

Keywords: *mood, season of birth*

Secondary school teachers' job satisfaction in relation to their organisational climate

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The aims of the current study were to examine the relationship between job satisfaction and organisational climate of secondary school teachers; and to study the job satisfaction differentials of secondary school teachers at different levels of organisational climate. A descriptive survey method was used and the sample consisted of 120 teachers. The hypotheses formulated were: (1) there exists no significant positive relationship between job satisfaction and organisational climate of secondary school teachers; and (2) there exists no significant difference in job satisfaction of teachers at different levels of organisational climate. The study was delimited to Kurukshetra district of Haryana State (India) and six secondary schools. Tools used were the Job Satisfaction Questionnaire (JSQ) for teachers by Parmod Kumar and D.N Mutha, and Organisational Climate by M.L Sharma. Correlation coefficients and t-tests were used. The study revealed that (1) job satisfaction of secondary school teachers was found to have no significant relationship with organisational climate and its different dimensions; and (2) no significant difference was found in the job satisfaction of teachers belonging to different organisational climate groups. Job satisfaction plays an important role in an individual's life and it depends on many factors. Job satisfaction is the results of various attitudes possessed by an employee towards his/her job. These attitudes are related to factors such as wages, conditions of work, advancement opportunities, prompt

settlement of grievances, fair treatment by employers and other benefits. Organisational climate results from the cumulative effect of ways in which the principal interacts with teachers; and the way teachers interact with each other and with the principal. Job satisfaction and organisational climate of teachers are of paramount importance and have bearing on their teaching performance. Therefore, needed facilities should be created in schools and teachers should also be provided with the required facilities.

Keywords: *secondary school, teachers, job satisfaction, organisational climate*

Self, other, and past experience in the process of perspective taking

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Perspective taking, the main cognitive component of empathy, is considered to be a significant part of human interaction. Within counselling and clinical practice, perspective taking has a particularly important and complex role to play in the clinician-client relationship. However, despite extensive investigation into the outcomes of this construct (for example, sympathy, altruism), the *process* by which people take another's psychological point of view has received comparatively little attention. The purpose of this study was to investigate what the individual does when attempting to take the perspective of another person. Specifically, the aims were to identify the specific strategies people use to accomplish this task, to consider how and why these strategies are chosen, and the relationship between the strategies and subsequent outcomes. Twelve community volunteers were provided with an induction to recall and describe an example of their own perspective-taking experience. A semi-structured interview guided participants through their recollection. Adopting an interpretive phenomenological approach, analysis resulted in the generation of several themes relevant to both the perspective-taking process and the wider empathic experience. Two superordinate process themes emerged, *use of other-*

information and use of self-information, from which several subordinate themes emerged. Of particular interest were those falling under the use of self-information theme, which included the use of past experiences, and a theme of shifting perspectives, which involved simultaneous consideration of self and other perspective. These strategies were considered important determinants of the effort required to apprehend another's perspective. While past experience was related to greater ease of the process, the latter strategy often resulted in some difficulty for the participant, as they had a unique, and in some cases conflicting, perspective to that of the other person. Implications for understandings of empathy more generally, and application to counselling and clinical areas are discussed. In particular, the advantages and challenges which result from the ways in which the person undertakes the process of perspective taking are focused upon.

Keywords: *perspective taking, empathy, counselling practice, psychological point of view, shifting perspectives*

Self-concept of secondary school students in relation to their classroom environment, academic achievement and gender

YADAV, R.S. (Kurukshetra University), SINGH, P. (Kurukshetra University)

The study was conducted with the following objectives: (1) to discover the relationship between self-concept and the classroom environment of students; (2) To examine the relationship between self-concept and academic achievement of students; and (iii) to investigate the difference between self-concept of male and female students. Accordingly, the following hypotheses were formulated: (i) there exists significant differences between self-concept and the classroom environment of students; (ii) there exists significant differences between self concept and academic achievement of the students; and (iii) there exists significant differences between self-concept and gender of the students. A descriptive survey method was used. The sample consisted of 100 students (50 males and 50 females) selected on a random basis from four schools. The Self-Concept Scale

of Sarswat, and the Classroom Environment Scale of Abdur Rehman were used. Academic achievement was measured using marks from the annual exam of the IXth standard. Correlations and t-tests were used to analyse the data. The study revealed that students' self-concept and classroom achievement were significantly correlated. It indicated that a better educational/classroom environment led to higher self-concept among students. Similarly, self-concept and academic achievement of students were significantly correlated. Boys had a significantly higher self-concept than girls.

Keywords: *self-concept, secondary students, classroom environment, academic achievement, gender*

Self-control, burnout, psychological well being and integrity

TRIANI, R. (Universitas Katolik Indonesia Atma Jaya)

This research aims to find out the connections between Self-control, Burnout and Psychological Well Being as independent Variables and Integrity of employees as a dependent variable. Robbins (2003) stated that integrity refers to honesty and trust, and is a positive hope that someone will not take advantages of other party. Two factors that influence integrity are personal and social factors. The questionnaire was constructed based on Edward Hoffman questionnaire which consists of overt and covert integrity. Self-control refers to the ability to keep firm control over one's own behavior. This questionnaire was constructed based on four dimensions of Self-control by Baumeister et al. Burnout is a syndrome resulting from prolonged exposure to stress, consisting of physical, emotional, and mental exhaustion plus feelings of lack of personal accomplishment. The questionnaire was constructed based on Maslach Burnout Inventory. Psychological Well Being was measured by Ryff Psychological Inventory that covers six areas of well-being: Autonomy, Environmental Mastery, Personal Growth, Positive Relations with Others, Purpose in Life, Self-Acceptance. This research was non-experimental research. For hypothesis testing, the researcher used the Pearson Product Moment Correlation method. The validity, reliability and hypotheses testing in this research

involved use of the SPSS 15.0 computer program. The results showed that there are connections between Self-control, Psychological Well Being and Integrity, but there is not any connection between Burnout and Integrity.

Keywords: *self-control, burnout, psychological well-being, integrity, Ryff Psychological Inventory*

Self-regulation and activation of hierarchical goals with feedback changes

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Previous research has indicated that goals affect the individual's adaptation (e.g., Deci & Ryan, 2000), and that the activation of specific goals can lead to success at self-regulation (e.g., Bargh, 2006). However, few studies have explored how goal activation both affects and reacts to decision making in the real world. In the present study, based on the supposition of hierarchical structure of goals (e.g., Austin & Vancouver, 1996), we aimed to identify goals that vary with feedback change and goals that contribute to self-regulatory success. Participants (n = 461) were presented with one of four different vignettes involving situations where they needed to regulate their impulses (i.e., buying, eating, antisocial behavior, and interpersonal conflict). Each participant was presented with five scenes from one vignette (one neutral scene and four different feedbacks). For each scene, participants completed the superordinate and subordinate goal scale that was developed based on the taxonomy of human goals (Ford, 1987), and completed their behavioral response whether they would regulate their impulse or not. A series of ANCOVAs revealed that the activations of specific goals varied by feedback. A series of ANCOVAs, in which the independent variable was whether participant succeeded in self-regulation, revealed that the activation of specific goals differed whether one achieved self-regulatory success. Specifically, the goals that affected the success of self-regulation did not necessarily correspond to the goals which changed in activation as a result of feedback. These results indicated that the activations of

specific goals were derived from the situational change. Moreover, the activation of goals differed whether one succeeded in self-regulation. The results provide evidence for the adaptive style of goal settings; people who do not succeed at self-regulation lack the flexibility of goal activation with feedback changes. In the future, how this goal flexibility affects our adaptation should be examined.

Keywords: *goal activation, self-regulation*

Self-regulation and personality factors of decision making effectiveness in extreme professions' specialists' activity

INDINA, T. (Russian Academy of Education), MOROSANOVA, V. (Russian Academy of Education)

Research is devoted to discovery of specific personality and self-regulation factors of decision making in emergency professions' specialists activity (life savers, firefighters, bodyguards). Self-regulation, according to Conscious self-regulation theory (Konopkin, 1970) is understood as an ability to initiate, organize, support, and manage external and internal activity which is goal-oriented. The following were used: Self-regulation profile questionnaire (SPQ; Morosanova, 1994), NEO-PI-R (Russian version; Oryol & Senin 2003), Personality factors of decision making (Kornilova, 2004), Decision making model, which includes practical tasks on decision making in lifesavers' professional activity (Indina, 2008). The research sample included 180 men who were extreme professions specialists in the age range of 24 to 60 years. To estimate effectiveness of the decision making experimental model "Decision making in emergency situations" was elaborated. The model allowed us to estimate six basic parameters of decision making: Search for information, Situation assessment, Subjective task representation, Alternatives construction, Choice of the alternative, Decision implementation. General effectiveness of decision making was esteemed by summarizing indexes of all six parameters. The results indicate significant connections between personality and regulation factors and decision making parameters. General effectiveness of decision

making, according to research results, depends on development of conscious self-regulation processes (including Modeling of significant conditions and Result estimation) and personality traits (Rationality, Openness, and Agreeableness). Regulation-personality profiles for specialists with high and low effectiveness of decision making were built. Specialists with high effectiveness of decision making are characterized by developed Result estimation, Modelling of significant conditions, Programming of actions and Goal planning regulation traits. Personality characteristics of highly effective in decision making specialists include Rationality, Openness and Agreeableness. For specialists with low effectiveness of decision making low level of basic self-regulation processes and high level of Neuroticism and Risk readiness are typical. It was concluded that personality traits and development of a conscious self-regulation system plays key role in effectiveness of decision making in extreme professions' specialists' activity.

Keywords: *personality, self-regulation, emergency workers, decision making*

Selling cars successfully: A retrospective analysis of the predictive utility of salesperson personality and bio-data

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This study aimed to examine the predictive utility of personality using the Five Factor model (FFM) and bio-data factors in determining sales success. It looked at how an individual' score on the factors – Openness, Conscientiousness, Agreeableness, Extroversion, and Neuroticism of the FFM and which bio-data factors will be predictive of sales success. The records of 107 (99 males, 8 females) salespeople working in the sales-force of a car sales company were used. Participants' data was extracted from the business records of an organizational psychology firm. All participants were sent an online invitation to complete a questionnaire comprising demographics; bio-data, Saucier's Mini Markers and the International Personality Item Pool (IPIP) questionnaire.

There was a positive correlation between IPIP extraversion measure and sales success as defined by total number of cars sold in the last calendar year ($r(105) = .24, p < .01$). A negative correlation was found between Saucier's measure of agreeableness and sales success defined as total dollar sales in the last calendar year ($r(105) = -.22, p < .05$). There was a positive correlation between length of employment and sales success ($r(105) = .27, p < .05$), sporting achievements and sales success ($r(105) = .28, p < .01$), work hours and sales success ($r(105) = .26, p < .05$). There was a negative correlation between lack of promotion and sales success ($r(105) = -.26, p < .05$). When assessing a salesperson's performance it is important to note that there are many aspects of personality and bio-data measures that may interplay. It is expected that the outcome of this research after further confirmatory analysis will assist individuals in terms of career selection, development of coaching programs, and commercial entities in the recruitment and development of potential salespeople.

Keywords: *big five model of personality, bio-data factors, sales success, international personality item pool, recruitment of salespeople*

Service integration success factors: A case study review of a regional youth health service integration process

WINDLE, K. (Deakin University), WINDLE, K. (Deakin University), VON TREUER, K. (Deakin University), MCGILLIVRAY, J. (Deakin University)

Headspace Barwon is a consortium of agencies that came together under the banner of 'headspace' to provide an integrated health service system to youth in a regional area. The aim of this study was to conduct a retrospective review of the service integration process engaged in by headspace Barwon and identify best practice service integration success factors. Eleven interviews and four focus groups involving 17 people were conducted with voluntary representatives from a range of stakeholders including. A thematic content analysis was conducted. Factors identified to facilitate the service integration included pre-existing regional health networks, design collaboration with both sector and community

representatives, establishing a shared service vision and integration model, early establishment of complimentary partnerships with high stakeholder buy-in, implementing common Information Technology (IT) systems, establishing common language between agencies, co-location, lack of any one-agency domination, and early generation of brand awareness. Factors identified as challenges to the service integration included competing models of service delivery between agencies, lack of inter-agency interaction, concerns over confidentiality with shared IT, anxiety and fear regarding change, lack of staff buy-in to the integration system, loss of pre-identity, change fatigue, and external pressure to implement changes quickly. A number of elements of headspace Barwon service's integration process are aligned with existing literature on best practice service integration and may be applied to future service integrations and change management planning.

Keywords: *service integration, integrated health service, change management*

Sexual orientation and suicide risk in the Philippines: Evidence from a national survey of young adult Filipinos

MANALASTAS, E. J. (University of the Philippines Diliman)

This paper explored links between sexual orientation and suicide risk in the Philippines, to replicate similar findings found in the global lesbian, gay, bisexual and transgender (LGBT) psychology literature. I examined data from the 2003 Young Adult Fertility and Sexuality Survey, a national population-based study of $N = 8,042$ Filipino men and $N = 8,922$ Filipina woman ages 15 to 24, using logistic regression analysis. Significant links between suicide risk (that is, suicide ideation and suicide attempt) and sexual minority status were found across three measures of sexual orientation (same-sex attraction, sexual behavior, and romantic relationships) for both male and female Filipino youth. These effects were partly mediated by depression, recent suicide attempt of a friend, and experiences of threat and victimization, as predicted by the Minority Stress Model. Similar to findings in global LGBT psychology, sexual

orientation is significantly associated with suicide risk in the Philippines, with lesbian, gay, and bisexual Filipino youth reporting higher suicide ideation and attempts than heterosexual counterparts.

Keywords: *sexual orientation, suicide risk, sexual minority status, minority stress, Filipino*

Sexual risk behaviour, general psychopathology and psychosexual symptoms among Victorian men who have sex with men (MSM) at risk of HIV transmission: Building our understanding of the psychological motivations for HIV risk behaviour

EARLE, M. (The Alfred)

This study aimed to build upon international literature informing HIV prevention policy and initiatives, by examining rates of and psychological factors contributing to HIV- risk behaviour (unprotected anal intercourse with multiple partners) among Victorian men who have sex with men (MSM). Specifically, it measured sexual risk behaviour, general psychopathology and psychosexual symptoms among Victorian MSM attending a specialist, sexual risk-reduction clinic, which have been identified in the literature as associated with HIV- risk behaviour. It then compared these rates with those in the general community and in HIV-risk studies internationally. All MSM attending the Clinic because of their sexual risk behaviour completed a demographic/sexual health/sexual behaviour questionnaire, the Personality Assessment Inventory (PAI, Morey, 2007), the Sexual Compulsivity Scale (SCS, Kalichman & Rompa, 1995) and the Sexual Sensation Seeking Scale (SSSS, Kalichman & Rompa, 1995) at Intake. Preliminary data suggested rates of general psychopathology were higher in the sample group than in the general community, including depression, anxiety, borderline features, drug and alcohol use and suicidality. Rates of sexual risk behaviour, general psychopathology, Sexual Compulsivity and Sexual Sensation Seeking, were also comparable to or greater than those reported in similar HIV- risk studies. High levels of comorbidity were observed. Notably, the clinic group showed high rates of treatment

readiness. Consistent with international trends, HIV- risk behaviour among MSM in Victoria attending a specialist sexual risk-reduction clinic was high, and was contributed to by a comorbid and complex mix of general psychopathology and psychosexual symptoms. Despite the sample bias and size limit generalisability, indications were that Victorian MSM seeking help for their sexual risk behaviour require specialist psychological intervention, and because of their self-awareness, motivation and treatment-readiness, are highly likely to benefit from it. Some clinical and public health implications of this work will be discussed.

Keywords: *sexual risk behaviour, HIV, Sexual compulsivity scale, sexual sensation seeking scale, personality assessment inventory*

Simulated scenarios of accidents : A good tool for young drivers' training

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The overall representation of young drivers in car crashes is a recurrent problem in developed countries. In order to prevent this over-representation, in France, young people can start early driver training at the age of 16, but the positive effects of this possibility are not manifested. We thus assessed the driving skills of traditionally trained novices, early trained novices, and experienced drivers, to evaluate whether early training improves young drivers' skills. Three groups of healthy male volunteers had to drive the simulator, 12 were experienced (licensed for more than three years), 12 were traditionally trained and 12 early trained (licensed for less than one month). Participants were confronted with five accident prototype scenarios introduced in an urban circuit. We checked the number of collisions and measured each driver's response (brake) time, speed and vehicle position on the lane. No significant differences appeared across groups regarding number of collisions and obstacle detections as revealed by the analysis of response times. We demonstrated the limits of traditionally trained drivers' position control, which was more conservative. Early trained and experienced drivers were more susceptible to try an efficient evasive action. The exposure gained by early

trained drivers appears to favor the development of visuo-motor coordination. The literature shows that the way novice drivers with poor driving experience (traditionally trained) scan the visual scene may partially explain their poorer performances. Taking the training period to improve young drivers' risk detection ability and to develop the skills necessary to deal with simulated accident scenarios is an approach that we recommend. Simulators should be regarded as a promising pedagogic tool.

Keywords: *young drivers, car crashes, driving skills, driving simulation, visuo-motor coordination*

Slower adaptation and simulator sickness in older adults when engaging in driving tasks in driving simulators

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Although driving simulators (DS) provide a safe and cost effective environment for evaluating driving ability, DS applications are not without certain limitations when used to assess older drivers. An important issue is the age-related adaptation deficits to simulation environments. In order to examine if adaptation deficits affect DS performance, we focused on two markers of adaptation: frequency of simulator sickness and the effect of simple repeated tasks on performance. We asked older adults with intact cognitive functions ($n = 17$) and normal young adults ($n = 15$) to perform two types of PC-based DS (Toyota Central R&D Labs, Inc.) tasks: the road tracking and the car-following tasks. In order to learn the operating system, the participants first practiced driving freely on a straight, two-lane road with no other traffic for a maximum of five minutes. Then, they were asked to perform the experimental task of controlling the speed and position of a car by manipulating the steering wheel, accelerator, and the brake pedal for five minutes, while watching the driving scene on a screen. The trial was repeated four times (trials One to Four). There was a significant trend ($p < .10$) for the frequency of simulator sickness to be higher in

the older adults ($n = 5$) than in the young controls ($n = 1$). Data of 14 older and 14 younger adults were analyzed, after excluding three older adults that suffered simulator sickness, who did not complete the test and a younger adult whose data was lost due to technical problems. Results of comparing the DS performance between the groups showed slower adaptation in older adults in the road tracking task, but not in the car-following task. In the road tracking task, the performance of older adults improved from the first trial to the fourth trial, whereas those of young adults did not change. By the fourth trial the performance of older adults was similar to young adults. The current study demonstrated that normal aging increased the frequency of simulator sickness, as well as the detrimental performance of the simple, repeated, task of road tracking. These findings indicate the limitations of using DS for screening older individuals for driving safety. Although DS have a better face validity than pencil-and-paper tests for assessing driving skills, the participant's capacity to adapt to environmental changes should be taken into consideration when using DS.

Keywords: *driving simulation, age-related adaptation deficits, simulator sickness, performance tasks, driving skills*

Social and psychological factors affecting people's perception of mental illness: A study of Saudi in Abha City

AL-GHAMDI, S. (King Khalid University)

Little is known about the perception of mental disorders and stigma in Saudi Arabia. The aim of this paper is to focus on the social and psychological factors that can affect people's perception of mental illness (or disorders). It can be admitted that most people in this country still believe that when a person has been labeled with a mental illness, they can never fully recover and will be socially isolated. In addition, they believe that the medicine given is like illegal drugs and that they will be addicted to it. Moreover, many think that people with mental illness will lose the respect of others as well as their roles in society. It is the main aim of this paper to examine the knowledge, attitude and beliefs about cause of mental illness and mental

disorders among people who suffer as well as among normal people.

Keywords: *mental illness, stigma*

Social cohesion in an ecological ordering of a rural municipality in México: From theory to practice

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The aim of this paper is to present a theory-methodological proposal of psychological work in ecological and territorial orderings through actions that allow the identification of different levels (and further development) of social cohesion as a key concept in the development of sustainability in rural communities. Social cohesion can be defined as the capacity of a society to ensure the well-being of all its members, minimising disparities and avoiding marginalisation. It considers four aspects: social capital, social integration, social inclusion and social ethics (Feres, 2006). Its measurement allows the community characterisation of its social cohesion in any of the four levels. This knowledge allows further work in increasing social cohesion of communities. The research project is being worked under a participatory action research framework in 13 communities of a rural municipality of Tzucacab in Yucatan, Mexico. Groups of men and women, with different ages, jobs, religions, etc., have participated in interviews and participatory workshops. It has been complemented with observation and documental analysis. The research has finished its first phase: the diagnosis at the 13 communities. The results presented in this paper show how the theory-methodological proposal was developed and applied at the communities and presents the social cohesion levels that characterise the different communities considering the combination of the four aspects mentioned above. The second phase is now beginning with the work through different participatory actions in every community to join efforts to increase their social cohesion considering their actual status as a starting point. Nobody would deny

the importance these days of sustainable development and pro-environment/ecological work, but it is a very complicated issue that needs interdisciplinary efforts. Despite this, the psychology discipline is not as involved in this kind of professional area as it could be. In spite of its importance, many social and psychological aspects are usually left behind and other biological, economic and engineering topics have been over worked. This paper presents an example of an opportunity for psychologists' professional development in issues pertaining to the environment.

Keywords: *social cohesion, sustainable development, pro-environment, ecological work*

Social comparison and self-appraisal effect on the feeling of pride

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The present study aims to examine the four different types of social comparison and self-appraisal that may influence the feeling of pride in the background of Chinese culture. Our sample consisted of 138 university students (31 males and 107 females). Participants had a mean age of 18.96 years ($SD = .81$), ranging in age from 18 to 21 years. They were randomly assigned to four conditions (mere public, praise, social comparison praised followed by a stranger and private no-feedback). Participants were asked to play an intelligence game at first. Participants played the game independently. They received different feedback when they finished the game. Each participant was alone with the experimenter at the time of the manipulation of priming social comparison. There were four situations: 1. Mere public condition; 2. Praise condition; 3. Social comparison condition and stranger effect; 4. No feedback. Later, they completed a series of questions. There were 12 items to measure participants' feelings about their performance and their perceptions about the task, such as: How good was your performance do you think? How proud do you feel about how you did on the task? How do you appraise your performance compared with others? The results were: 1. Participants experienced different intensities of pride. Social

comparison played a significant effect on the feeling of pride. The participant in the social praise comparison condition followed by a stranger had the highest level of the pride. The no feedback group of participants had the lowest level of pride. 2. Self-appraisals and others appraisals had significant correlations with the pride. 3. Self-appraisal based on comparison with others and self-satisfaction was a predictor for the feeling of pride. Social comparisons affected the feeling of pride. The level of pride increased across comparison conditions. Self-appraisal and self-satisfaction can predict the feeling of pride. Our findings support pride being influenced by self-appraisal.

Keywords: *pride, social comparison, self-appraisal, self-satisfaction, public praise*

Social desirability responding impact in training report evaluations

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The purpose of this research was to prove that social desirable responding (SDR) not only affects self-report measures, but also other kind of scales. In work settings there is empirical evidence that people's self-impressions are inflated. This self-enhancing tendency has been empirically established for peoples' own perception of their task performance (Robins & Paulhus, 2001), but the question which arises is: What happens when evaluating "others" performance? The SDR would be equally important to control when assessing "others" performance? Based on a non-probabilistic sample of 487 workers, enrolled in training courses, we evaluated the impact of SDR in the appraisal of course instructor's performance. In order to evaluate SDR we use the Balanced Inventory of Desirable Responding (BIDR), version 7 (Paulhus, 1998) in conjunction with a scale explicitly developed to evaluate instructor's performance, based on nine items in Likert type format, named the Training Evaluation Questionnaire (CEC). We use two types of instruction in order to induce or control SDR based on a specific social demand situation. The results show that the experimental and control group differ significantly ($t = -5.5$; $g/$

57 $p = 0.000$) indicating that when inducing SDR, the scores in BIRD and in CEC were higher than in the control group (standard instructions). Using a Pearson correlation, between the two scales, the correlation indices run from .15 to .25 for the total sample, but when considering only the experimental group, the indices increase and run from .37 to .46, indicating a significant association between the two scales. In other words, there is an effect of SDR in the CEC when manipulating an instruction to induce a social demand situation, when assessing a third person's performance. In this sample, every two of ten performance evaluations present a SDR. The presence of SDR in this type of report suggests that people inflate the rating estimation of instructor's performance just to "appear more friendly" or more desirable to others, causing erroneous estimations and affecting possible improvements in training projects.

Keywords: socially desirable responding, self-impressions, performance appraisal, training, task performance

Social goals and academic engagement among Filipino students

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Much of the research on achievement goal theory has focused on the roles of mastery and performance goals in academic engagement, thus the role of other goals like social goals have been neglected. Academic engagement refers to the commitment of the student to the school experience, and it has been conceptualised as a multifaceted construct that includes cognitive, behavioral, and emotional components. Behavioral engagement refers to involvement in academic tasks and includes such behaviors as persistence, effort, and asking questions. Emotional engagement involves affective reactions to the school. Cognitive engagement refers to psychological investment in the learning process shown through deep learning strategies. The aim of this research was to investigate the effects of different kinds of social goals (social approval goals, social affiliation goals, social status goals, social responsibility goals, and social concern goals) on

the different facets of academic engagement. Participants were 1300 Filipino secondary school students who answered questionnaires assessing their social goals, achievement goals, social support, and academic engagement. Hierarchical regression analyses were employed to investigate the effects of social goals on academic engagement after controlling for demographic variables (age and gender), social support, and achievement goals. Even after controlling for demographic variables (age and gender), social support (teacher support, peer support, and parental support), and achievement goals (mastery goals and performance goals), social goals were still found to be predictive of the different components of academic engagement. The different kinds of social goals are also important in understanding academic engagement. We recommend that researchers consider investigating these constructs instead of focusing exclusively on mastery and performance goals in the achievement goal theory. Social goals may especially be salient for collectivist societies like the Philippines.

Keywords: social goals, academic engagement, students, Filipino, mastery

Social goals and their effects in academic engagement in learning in Chinese university students

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Filial piety, friendship and discipleship are traditionally valued by Chinese people. Children respect their elders and strive to satisfy the wishes of their parents. Tao and Hong (2000) indicated that Chinese students have strong social reasons to achieve academically as the values of Chinese achievement have a high collective and social nature (Yu, 1996). Smith (2003) argued that Asian students are extrinsically motivated, based on the desire to please teachers and parents, and intrinsically motivated to perform as well as possible. Salili (1996) argued that Chinese students' achievement motivation is socially oriented. Social-oriented goals are especially important for Chinese students, but they have not attracted enough attention in the previous studies,

especially in the ones based on Chinese samples. The relationships between students' social goals, and motivation and engagement as well as the roles of social goals in students' achievement have not been examined well among students in universities in China. In this study, Martin's (2005) Motivation and Engagement Scale-University/College (MES-UC), as well as subscales (social approval, social concern and social status) in Dowson and McInerney's (2004) Goal Orientation and Learning Strategies Survey (GOALS-S) were administered to 832 university students in China. The results showed that Chinese student' self-belief and learning focus are significantly related to academic achievement; anxiety is significantly related to achievement but in the opposite direction. Social status oriented goals is significantly related to achievement and they act as mediating variables between self-belief, learning focus, anxiety and achievement. These results partly supported Dowson and McInerney (2001)'s argument that that social oriented goals of Australian students directly affect their psychological processes when they strive to achieve. For social approval and social concern, there is not a mediating effect from them between MES-UC and students' achievement. It is concluded that social status oriented goals of Chinese students mediate the effects of academic motivation and engagement on their learning. These findings are discussed in the context of the special importance of social goals in Chinese students, and the roles of these goals in understanding students' engagement and learning.

Keywords: academic motivation, social status oriented goals, student achievement, learning strategies, students

Stigmatisation of employees with depression: Exploring the role of managerial characteristics and organisational climate

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This study is an investigation of how levels of managers' cognitive, affective and behavioural stigma towards employees with depression are affected by the managers' depression

experience, as well as the mental health climate of the respective organisation. Drawing on social contact theory, it was hypothesized that managers would report less stigma if they had a personal experience with depression, or an experience with a significant other with depression. It was also predicted that managers who are more reticent to seek help would have more stigma towards employees with depression. Additional hypotheses involved the mental health climate of the organisation having both a main and a moderating effect on stigma. Participants ($N = 223$) assumed the role of a manager in a company, managing an employee suffering from depression. Using a vignette, the mental health climate of the organisation was manipulated to be supportive or unsupportive toward employees with depression. Participants' ratings of stigma toward depressed employees were measured, as was the participants' own level of experience with depression, their experience of a significant other with depression, and their reticence to seek help. Contrary to that hypothesized, personal experience with depression was positively related to affective stigma. Experience with a significant other with depression was related to lower levels of cognitive stigma. Help-seeking reticence was positively associated with cognitive and behavioural stigma. Consistent with predictions, it was found that those in the unsupportive mental health climate had more cognitive and behavioural stigma than those in the supportive mental health climate. Statistical testing of the model indicated that there were differences between the two mental health climates, but overall no moderation was seen. These results pose important implications for organisations, such as workplace training in depression management.

Keywords: social contact theory, depression, organisational mental health climate, employee depression, help-seeking

Strategy training and transfer in teenagers with or without learning disabilities

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Memory strategy training in young people has long been a topic of interest for researchers.

Since the work of Flavell (1970), the possibility of enhancing memory scores by the use of a correct strategy training procedure has often been challenged. Many authors showed that training constitutes a good way of allowing children to become more strategic and consequently, at least in certain cases, exhibit better recall scores (Pressley & Hilden, 2006). Among others, the sorting strategy (Coyle & Bjorklund, 1997) has been intensively studied. This strategy, which belongs to more general categorization strategies, consists in physically sorting items in their relevant categories during the time of examining material in order to be able to recall it later. Sorting is well-known in children between 5 and 10 years of age, probably because of its impressive development during this period. Little is known, however, about what happens in teenagers and especially teenagers who manifest learning disabilities, even if other strategies like rehearsal (Hulme & Mackenzie, 1992) or use of a mental image (De la Iglesia, Buceta & Campos, 2004) have been studied in learning-disabled persons. Since sorting is only possible once the child acquired the logical properties of categories and since these properties are clearly abstract ones, we should observe difficulties in the use of sorting, not only in typically-developing children before 10 –as is the case– but also in older children with learning disabilities. Based on the assumption that learning-disabled teenagers encounter specific difficulties with the sorting strategy, our experiment allowed us to compare strategic and recall scores from three groups : a group of teenagers with identified learning disabilities ($50 < IQ < 70$), a group of teenagers with probable - but no identified - learning disabilities and who belong to a special school for children with family and/or social problems (French “Maison d’Enfants à Caractère Social”), and a group of typically-developing teenagers. Each of these three groups was separated in an experimental group which received training in a sorting strategy as well as recall tests, and a control group which only received recall tests but no strategy training. A pre-test/training/post-test design was used, in which the “Letter-Number-Sequencing” (L-N-S) subtest of the WISC-4 served as recall baseline during the pre-test, then training and/or recall were proposed and tested across three training sessions of two trials each (six trials), and finally the L-N-S subtest was

again proposed as a post-test. The strategy score consisted in the Adjusted Ratio of Clustering (ARC score, Roenker, Thompson & Brown, 1971), recall during the training sessions directly assessed the efficacy of strategy use, and the L-N-S final score served as an assessment of transfer of the sorting strategy in a different task than that where it was trained. Results showed that both groups of learning-disabled teenagers (“identified” and “supposed to be” learning-disabled) benefited from strategy training, as is evidenced by the significant better strategy and recall scores in trial 6 than in trial 1 for experimental participants : control participants did not enhance any of their strategic or recall scores between trials 1 and 6. Furthermore, sorting strategy was transferred to the “L-N-S” subtest as was visible in the significant difference between pre and post-test scores: again this was only true for experimental participants, however. Surprisingly, the pattern was reversed for typically-developing teenagers: neither did experimental participants (who were constrained to listen to strategic training) sort or recall better in trial 6 than 1, nor did they transfer the sorting strategy. On the contrary, control participants performed better in trial 6 than 1 for both sorting score and recall score. Nevertheless, they did not differ in their “L-N-S” pre and post-test scores. Clearly, strategic training with sorting has helped learning-disabled teenagers to both better master the requested strategy and better recall the verbal items at use. Sorting strategy, a kind of categorization strategy, then seems subject to refinements and progression after the age of 10, which is classically considered to be the age at which this strategy is definitely acquired and nearly perfectly used (Schneider, Kron-Sperl & Hünnerkopf, 2009). Our results shed some light on the evolution of this particular memory strategy in teenagers who frequently encounter difficulties, and even failures, in school everyday activities. Such teenagers seem to actually benefit from training in the use of a sorting strategy, probably because they usually lack the abstract categorical knowledge which constitutes a pre-requisite to the use of a categorization strategy like the sorting one: the training would have permitted them to identify the categories, and as a consequence, to use them for correctly sorting items. Finally, contrary to what is often held as true, our learning-

disabled participants also revealed the ability to transfer the trained strategy in another task, namely the “L-N-S” task. Strategic and recall performances of typically-developing teenagers showed that these young people, who certainly had acquired the sorting strategy for many years, seem to have been disturbed by systematic strategy training. Specifically, trained typically-developing teenagers did not enhance their strategic and recall scores, whereas it was the case for untrained ones: it could be the case that the strategy training we used here caused a conflict with the spontaneous way our participants produced the strategy. Finally, this conflict was present in the strategic score itself as well as in the recall score.

Keywords: *memory strategy, memory training, children's memory, recall score, categorization*

Stress and resilience of Chinese government officers following the 2008 Wenchuan earthquake

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This paper established a method to analyze the stress that government officers were under after the Wenchuan earthquake. In addition, main factors which affected individual resilience after the earthquake are also appraised. The semi-structural questionnaire method is applied in this study 17 months after the earthquake. The questionnaires are based on the responses of government officers from Beichuan – the heaviest disaster area. Twenty six officers of different levels from the county assisted us to complete the study by using their own working experiences and knowledge about the disaster. Beichuan county is the only Qiang nationality autonomous county in China. The catastrophic disaster resulted in 15, 645 dead, 1, 023 missing, and 26, 916 injuries, which account for one eighth of the whole population in the county. As for the government officer, nearly a quarter of them (466 people) are dead or missing. The stress that government officers are under derives mostly from two aspects. On the one hand, their family members, relatives and friends may die or be missing. On the other hand, they are frequently suffering from

overtime work and relocation of working place due to reconstruction of the city in other regions. According to the study, the main factors which affect individual resilience are degree of damage, individual characteristics (including gender, age, personality, coping style, life meaning), social support, collective efficacy, and national policy. The resilience status of the government officers are affected by various factors with respect to the degree of damage, the individual characteristics, the social support, and national policy.

Keywords: *earthquake, disasters, social support*

Stress, coping, and burnout among Chinese nurses

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The issue of nursing stress and coping are a big concern in the area of health care (Kickaldy & Martin, 2000; Lambert & Lambert, 2001) as stress can often lead to negative outcomes such as illness, job dissatisfaction, increased turnover, absenteeism and decline in the quality of care. The main aim of the study is to look into stressors, coping strategies and their relationship to burnout amongst a sample of Chinese nurses. The goal of the study is fourfold. First it aimed to identify key stressors in the nursing practice. Second it looked into how coping moderated the relationship between stress and burnout. Third, it investigated the effects of different coping strategies on specific stressors to identify which coping strategies would moderate the stress-strain relationship and in which direction. And fourth, it aimed to identify themes in coping strategies used by these nurses. The data was collected from 370 Chinese nurses in a general hospital in Southeast China using the Expanded Nursing Stress Scale (ENSS), the ways of Coping scale (WCS) and the Copenhagen Burnout Inventory (CBI). Factor analysis identified several overarching themes amongst different nursing coping strategies. Results also indicate that overall stress predicts burnout in all three burnout domains (personal, work-related and client-related). Coping acted as a moderator for the stress-strain relationship for

all three dimensions of burnout. The moderating effects of individual coping strategies differ for different nursing stressors – some helped alleviate the aversive effects of stress while others worsened them. Areas for development and improvement of support for nurses will be presented further in detail. Implications of the study suggest the need to train nurses to develop diverse and appropriate coping skills to handle specific nursing stressors. Furthermore, setting up communication networks among doctors, patients and their families could be very helpful in improving relations between the providers and recipients of healthcare.

Keywords: *stress, stressors, coping, coping strategies, burnout*

Stroke prevention: Modification of risk factors depending on personality factors, stress coping strategies and affective syndromes in patients with transient ischemic attacks

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Medication taking behaviour is an important step to optimizing the use of secondary preventive therapies in patients with transient ischemic attacks (TIA) and stroke. However, the importance of specific neuropsychological factors including personality factors, stress coping strategies and affective syndromes in medication taking behaviour in patients with TIA has not been investigated in detail. Sixty patients with TIA in anterior or posterior circulation are included in this study. The index event is classified as a TIA if neurologic symptoms resolve within 24 hours and neuroimaging (Cerebral Computed Tomography and or Magnetic Resonance Imaging) is negative. Vascular risk factors assessed at baseline and three months after the index event include hypertension, diabetes mellitus, hyperlipemia, obesity, smoking status and alcohol consumption. Neuropsychological testing includes a stress coping test, personality test,

affective questionnaires (anxiety and depression) and health behaviour questionnaire within 48 hours after admission and three months thereafter. Our data will document the adherence to secondary stroke prevention therapies in regard to specific neuropsychological factors. Our results may improve the quality of care after stroke and may reduce the risk of future cerebrovascular events.

Keywords: *quality of care, strokes, neuroimaging, stress coping, neuropsychology*

Structure and measurement of teachers' learning procrastination

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The 21st century is a so-called "century of learning". Learning, both for students still in school and adults who have left school, is attracting more and more attention. We have been in charge of a project of the Ministry of Education of China from 2005, which researches adults' learning behavior. We have found out that learning procrastination is a common phenomenon among adult learners, even teachers. Based on document retrieval, open survey and structured interview, we have put forward a "5-factors hypothesis" about the internal processes of learning procrastination. Then we have verified the hypothesis through factor analysis. The main behavioral expressions of learning procrastination have been revealed as follows: (1) negative cognition to learning task; (2) being in low spirits; (3) weak will; (4) weak motivation; and (5) the habit of delaying. According to the principle of psychometrics, we have developed the Teachers' Learning Procrastination Questionnaire. As a reliable and effective tool, it could be academically or practically used in the fields of educational psychology, learning guidance, teachers' education and adults training.

Keywords: *teachers, learning procrastination, structure and measurement*

Student emotional and psychological support: A case study of a residential international school

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The aim of this study was to better understand how well the pastoral care program, as well as the overall school community, provided emotional and psychological support to academically gifted students by identifying the organization's strengths, challenges, and opportunities for growth. Using a case study methodology, I collected data from multiple stakeholders, including students, staff, and the faculty in order to analyze complex and dynamic organizational issues. In particular, I collected narrative data (for example, interviews), textual data (for example, written documents) & observational data (for example, staying on campus). Using this methodology allowed me to seek various representations of the issues and to pursue a multifaceted understanding of the phenomenon. Results demonstrated that although the pastoral care program and overall school community provided some psychological and emotional support to a portion of the student body, many students and the faculty were confused about the nature, purpose, and goals of the program. Additionally, the school operated from two different visions and philosophies, which sometimes created situations that became negative and divisive. However, where there was congruence between student and faculty expectations and roles, community agreement on how difficult situations should be handled, and a common vision between individuals and the group, students and faculty felt psychologically and emotionally supported. The opportunities for growth focused on how to build capacity for the community with a focused emphasis on the pastoral care program by developing congruent expectations, increasing consistency, and adding new evidence-based interventions at all levels of the system – individually, relationally, systemically, and philosophically. This research provided important insights and recommendations that opened up optimistic conversations and opportunities for the community to make intentional and integrated positive changes in order to significantly improve the psychological and emotional well-being of the community. The results of this study have led to further ongoing program development and research using an Appreciative Inquiry model.

Keywords: *pastoral care program, student well-being, community change, appreciative inquiry model, narrative data*

Student perceptions of plagiarism

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Plagiarism is perceived to be a growing problem and Universities are being required to devote increasing time and resources to combating it. Theory and research in psychology show that a thorough understanding of an individual's view of an issue or problem is an essential requirement for successful change of that person's attitudes and behaviour. The aim of the present study was to develop a better understanding of how students construct plagiarism by using group discussion to explore the range of opinions regarding students' perceptions of plagiarism. In the pilot study, seven focus groups were held with first and third year students across discipline areas and modes of study. A thematic analysis revealed six themes of perceptions of plagiarism that are outlined under six main headings: confusion, fear, perceived sanctions, perceived seriousness, academic consequences, and resentment. These dimensions and the relationships between them were developed into a concept map. The current study was a pilot to a research program aimed at exploring these relationships.

Keywords: *plagiarism, student perceptions, perceptions, academic consequences*

Students' conceptions of generic skills development in a university in Hong Kong

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This paper aims to present the development of a survey from the findings of a pilot study of students' conceptions of generic skills development in a university in Hong Kong. Twenty-nine interviews were conducted with 93 undergraduate students in a research-intensive university in Hong Kong. Students were asked to describe their understanding of generic skills development and relevant experiences in their

university education. Students' definitions of the term "generic skills" and opportunities in the university they had experienced about developing such skills were identified. Generic skills were conceptualized by students as skills that could help them tackle stressful or unknown situations. Students identified critical thinking and communication skills as the most important skills to help them solve problems. Students indicated the dispositions to obtain information, to analyze information critically, and to make rational decisions as the skills related to critical thinking. Effective communication involved not only conveying ideas but also the ability to be assertive when collaborating with others. Students indicated more awareness of generic skills development when these were described explicitly as the objectives or outcomes of teaching and learning activities. They perceived more positive development when they were asked to reflect upon their learning experiences. These students also described that by developing these skills in and through university education they would be able to develop confidence in handling stressful and unknown situations in life. Undergraduate students conceived of generic skills as the tools to increase their chances of success in the changing world or unknown future. Critical thinking and communication skills were identified as overarching attributes of more basic generic skills. Also, teaching and learning activities with clear objectives and learning outcomes and that foster self reflection might help to enhance positive development. These findings suggest assessing achievement of basic skills and self-efficacy in uncertainties as evaluation of generic skills development in undergraduate students.

Keywords: skills development, generic skills, learning experiences, self reflection, self-efficacy

Study habits of secondary school students in relation to their sex, parental level of education and place of residence

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The aim of this study was to study the effect of sex, parental level of education and place of residence on study habits of students. A

descriptive survey method was used. The study was confined to 200 ninth grade students of Government and aided schools of the Gurgaon district of Haryana (India). The sample consisted of 50 male and 50 female urban students; and 50 male and 50 female rural students; selected from five different senior secondary schools. A questionnaire created by the researchers was used. The mean, standard deviation, standard error of means and t-ratios were calculated to identify any significant differences between means. Frequencies and percentages were also calculated. The study revealed that female students had better study habits than the male students in English, Social Studies, Mathematics, Science and Hindi. The students whose parental level of education was higher had better study habits than those of low parental level of education in English, Social Studies and Mathematics. Parental educational level had no effect on students' study habits for Science, Hindi and General Reading. Urban students had better study habits than the students belonging to a rural place of residence for English, Social Studies and General reading but no difference existed among students in Mathematics, Science and Hindi in relation to their place of residence. Rural female students had better study habits than rural male students in Mathematics and Hindi; but in English, Social Studies and General Reading, rural male and female students did not differ in their study habits. Similarly, urban female students had better study habits than urban male students in English, Social Studies, Mathematics, Science and Hindi, but not in General Reading. Study habits affect academic achievements of students. Therefore, students should be helped to develop good study habits, and teachers, in particular, can do a lot in this context.

Keywords: study, secondary students, gender, rural students

Study on the job and tacit knowledge structure of salespersons in insurance

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Tacit knowledge is one of the hot topics in contemporary knowledge management research. From the strategic resource view,

compared to explicit knowledge, tacit knowledge is the most important resource of competitive advantage for not only the organization but also the personal. Though some research and discussion towards tacit knowledge and its frameworks has been carried out by former researchers, the swatch of salespersons in insurance has been touched upon only a little. This research takes salespersons in insurance as subjects being investigated and probes into the tacit knowledge of their job deeply. We collected the questionnaire items by the interview method on the basis of the extensive literature, and formed a questionnaire of tacit knowledge of salespersons' job. We surveyed 750 salespersons, two swatches, as subjects investigated and explored and validated the structure of the tacit knowledge of salespersons' job. In addition we explored the relationship between tacit knowledge level and the demographic variables. We achieved the following results: the structure of the tacit knowledge of salespersons' job is composed of six factors; the questionnaire of the tacit knowledge of salespersons' job has superior reliability and validity; the Cronbach's Alpha based on standardized items is 0.866, the split-half reliability is 0.849 and the repeated measurement reliability is 0.902; and the exploratory and confirmatory factor analysis shows the questionnaire has good structural validity. We achieved the following conclusions: 1. After exploratory and confirmatory factor analysis, we found that the structure of the tacit knowledge of salespersons' job is composed of six factors: organizing and harmonizing, active attitude, market seeking, communication sensing, self restricting and sales planning. 2. The questionnaire of the tacit knowledge of salespersons' job has superior reliability and validity. The correlation coefficients between the dimensionalities indicate that the content validity is superior. The regression analysis shows the questionnaire has a good predictive validity. 3. The total score of the tacit knowledge of salespersons' job and the organizing and harmonizing, market seeking and self restricting in the three levels of their sales' years have significant differences. The more sales years, the higher the total score and the organizing and harmonizing score, market seeking score and self restricting score. The total tacit knowledge levels and those of each dimensionality have no

significant differences based on sex, speciality and record of formal schooling.

Keywords: *tacit knowledge, insurance salespersons, contemporary knowledge management, market seeking, active attitude*

Successful treatment of an 80-year old man with a 65 year history of obsessive-compulsive disorder: A case study

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Exposure and response prevention (ERP) is proven to be a useful treatment for adults with Obsessive Compulsive Disorder (OCD). However, there is currently limited empirical evidence to suggest that this treatment is effective for the treatment of OCD in older adults (those aged over the age of 65). The current case study aims to address this gap in the literature. The participant was an 80 year old man with a reported 65 year history of OCD. He had previously received non-specific psychological treatment as well as pharmacological interventions but had failed to benefit from these approaches. At the time of the current treatment the participant was medicated on 50 milligrams of Sertraline and had been stable on that dose for four years. This medication dosage remained stable throughout the treatment and follow-up period. Treatment consisted of 11, 50 minute weekly individual treatment sessions of ERP, conducted by a clinical psychologist. The participant was assessed on the Yale-Brown Obsessive Compulsive Scale (YBOCS), the Global Assessment of Functioning (GAF) scale, and the Obsessive Compulsive Inventory (OCI) at pre-treatment, post treatment, and at seven month follow-up. At seven month follow-up the scores on the Y-BOCS had reduced 65% from 20 (moderate), to seven (subclinical). On the GAF scores improved from 65 at baseline to 85 at the seven month follow-up. On the OCI total scores reduced 45% from 38 at baseline to 21 at seven month follow-up. Scores on all OCI subscales reduced over the course of the treatment. On the checking subscale, scores reduced 56%. The results of this case study add to the preliminary evidence that ERP appears to be an acceptable

and successful treatment for older adults, as it is with younger adults. Modifications may need to be made to traditional ERP for this age group however due to the existence of medical comorbidities and cognitive decline. These will be discussed. Further research is required to assess the effectiveness of this treatment for geriatric OCD patients.

Keywords: *obsessive compulsive disorder, exposure, response prevention, older people, global assessment of functioning*

Sunset and moonrise: Athletes' experiences and reflections in the twilight of their careers

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The aim of this study is to describe and explore the thoughts, emotions, behaviors, and the intra- and interpersonal experiences and reflections of athletes who are, at the time of the investigation, in the twilight of their sporting careers (i.e. when interviewed, are considering retirement within the next two to four years). Participants involved are aged between 30 and 45 years of age. The study involves at least four interviews with each athlete over an 18-month period (beginning, 6 months, 12 months, and 18 months). In an attempt to provide, a holistic account of the athletes' lives, particular attention is paid to the athletes' perceptions and experiences (hopes, dreams, disappointments, high and low points) of their past, current, and future sporting careers. Areas such as adversities, resiliency, identity, personal development, and future plans are explored. Furthermore, an interpretative narrative to their life stories (Denzin, 1989) has been applied, as the researchers engage, explore, and interpret the subjective experiences of the athletes. The study is on-going, and the first round of interviews has been conducted. By the time of the conference, the second round of interviews (at 6 months) will have been completed and analyzed. This presentation will provide a glimpse into longitudinal research in progress, and preliminary interpretations of the cases (so far) will be presented.

This research will increase our understanding of how the potentially turbulent and stressful pre-retirement period of athletes can be better managed and, by extension will allow us to improve the mental health and well being services available to athletes.

Keywords: *pre-retirement period of athletes, athletes' perceptions and experiences, interpretative narrative, athletes, athletes' well-being*

Supporting services and quality of life in people with multiple sclerosis

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Multiple Sclerosis (MS) is one of the most common non-traumatic and weakening diseases of the central nervous system, which causes many somatic, psychological and social problems; and mainly has an unpleasant effect on different aspects of the patient's, and their families', quality of life. This study has been performed in order to evaluate the relationship between supporting services and different aspects of life quality in MS patients in Tehran city. This was a coherence type study which was done by simple random sampling from active existing files in the Iranian MS association and Sina MS super-specialist clinic. Among these, 60 files were selected. By estimating sample volume in coherence research, sample volume was determined. Life style was evaluated by a standard questionnaire containing 54 questions (The Multiple Sclerosis Quality of Life-54 Instrument) and for evaluation of the type and quality of supportive services, the researcher's questionnaire used 46 questions. The relationship among variables was assessed by the statistical test of Spearman correlation coefficient. The findings indicate that there are significant relationships between supportive services and these items: promotion of somatic health, decrease in somatic/emotional limitations in performance of the role, increase in psychological health, fatigue decline, increase in health sense, optimization of cognitive and social performance, decrease in anxiety regarding health, improvement in health condition and promotion of life style from the

patients' point of view. There is no significant relationship between supportive services and increase in sexual performance of patients and pleasure from their sexual performance. According to the results of this study some procedures and activities can be used for increasing supportive service levels in MS patients who need these services in order to promote their quality of life.

Keywords: *multiple sclerosis, quality of life, supportive services, somatic health, central nervous system*

Surveillance study for intervention to prevention of street crime: The relationship between the information and the perception

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The main purpose of this study was to investigate the aspects of criminal cases in recent Japan. As the lifestyles of Japanese people have changed, the pattern of criminal cases has been changing. It is therefore important to conduct an investigation of actual conditions. This investigation consisted of two phases. The first was to count the number of criminal cases, which corresponded to several domains. The second was to analyse the data, which were gathered in the first phase. The aim of the second phase was to find the features that were difficult to discover by only counting the number. A further purpose of this study was to investigate the relationship between the actual criminal cases and people's perceptions of the criminal cases. Most people feel anxiety when they know the information about the criminal cases in their daily life. Although most people feel anxiety, anxiety does not consist of only one component. Anxiety has many aspects and consists of many components. It is important to identify the components and examine how the components relate to each other. The further purpose of this study was to investigate the individual differences of participants when they know the information about the criminal cases. The participants of this study were about 250 undergraduate students. Participants read the report about the number of the criminal cases. After reading the reports,

participants were asked to answer some multiple-choice items and to write how they felt about the contents of the report. The result of this study was that several types of anxieties were found. Moreover some components of anxiety were related to each other. A more sophisticated study is needed to clarify the detailed relationship between information and perception.

Keywords: *criminal cases, anxiety*

Survey on attitudes toward driving and giving up driving of the elderly in regional cities

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The car has an important impact on the daily life of the elderly and their social activities and participation. However, physical depression caused by aging is also a cause of traffic accidents and they will all have to give up driving one day. The aim of this study is to clarify the effect on daily life of car dependency and the impact of having to stop driving among the elderly. We also aim to proposition for substitute methods of transportation to continue for elderly going about their daily life after having to surrender a driver's license. We carried out a questionnaire survey and a follow up group interview. In this investigation, we sent 1,338 questionnaires to the over 60 year olds in regional cities that include areas with public transit convenience and inconvenience. The recipients of the questionnaire were chosen based on random sampling using the Basic Resident Register for the two regional cities. We extracted three kinds of areas with different degrees of public transport convenience in each city. The questionnaire contained the following contest. (a) Profile of recipient: state of health, usage of public transport, (b) Driver's license holder: driving frequency and purpose, when is it time to give up driving?, notice symptoms about their body functions and driving abilities, (c) Those who had surrendered their license: reason and process, any feelings of unease or about post-driving mobility. We received 767 questionnaire returns, that is, 57.3% of the number sent out. Percentage of respondents

broken down by having car license were driver's license holder 62.4% ($N = 474$), non-holder 34.2% ($N = 260$), and those who had surrendered their license 3.4% ($N = 26$). From one target area called limit village, more of the respondents (around 48%) were over-75 years old than in other areas. There was little difference among areas in the frequency of going out of the house, but there was in the purpose of going out. Trips related to farming were high in areas outside city centers, while "commuting to work" was high in city centers. "Daily shopping," was cited in both areas. The mode of transportation often included driving one's own car, but in city centers, "on foot" was a common response. Persons living in limit villages used cars more commonly than in the other areas, broken down into other people's (family's or neighbor's) cars (23%) or own car (44%). Although some respondents used public transport, centers that were near to a train station of the train had little use in each district. Overall satisfaction about their current mobility was high (around 90%). The frequency of going out among recipients decreased as they became older and the necessity of the public transport increased. In addition, the need to travel to a hospital increased along with aging. The consciousness of giving up driving so as to become old and the number of years during which they could drive were limited. The investigation revealed that aging and physical infirmity was significantly related to driving ability. In addition, respondents living in a "graying area" have a strong need to drive, are anxious about the risk of giving up driving and need an encouraging improvement in the mass transportation system.

Keywords: transport, elderly drivers, driving, depression, public transport

Systematic case studies of four depressed young women counselled with process-experiential emotion-focused therapy (PEEFT)

HARTE, M. (La Trobe University)

There is a consensus amongst counselling researchers of a need for investigations that employ collaborated systematic qualitative

methodology into "what works" in therapy. Process-Experiential Emotion-Focused Therapy (PEEFT) is an integrative, evidenced-based, manualised, experiential therapy developed in the mid 1980's by Greenberg, Elliott and Rice. PEEFT emphasises the quality of the client-therapist relationship and offers interventions/tasks to assist clients to deal with emotional experience in the present moment. Experiential treatments have been found to be effective with depression, anxiety and trauma in adults. This presentation reports on a study of in-therapy experiences and treatment effects of four severely depressed young women (20 to 26) counselled with PEEFT. The study investigated "change processes" using established psychometric measures and observations in 12-session PEEFT treatment modules with the four young women in a naturalistic counselling setting. The design is consistent with the flexible framework, presented by Elliott and Zucconi in 2005, for guiding individual and collaborative research for the international investigation on the effectiveness of person-centred and experiential psychotherapies. Further, this study utilised expanded single case designs that take an interpretive approach to examining client change and its causes. In general, these designs aim to: (1) demonstrate that change occurred, (2) examine the evidence for concluding that therapy was responsible for the change, (3) examine alternative explanations for the change, and (4) examine which processes in therapy might have been responsible for change. A simple thematic analysis highlighted themes of change from the client's perspective. Clinical significance was determined. After six sessions, three of the women's level of depression was measured as within mild to moderate ranges. The fourth young woman experienced an unplanned pregnancy and miscarriage during the therapy but her depression reduced by the end of her sessions. All four women described reduction in other reported concerns and major shifts in their perceptions of themselves and their world view. The systematic case study methodology, within a participatory inquiry, allowed in-depth personal accounts of the women's journeys through depression via PEEFT counselling.

Keywords: *counselling, process-experiential emotion-focused therapy, client-therapist relationship, depression, world-view*

Taboo trade-offs, moral outrage and the moral limits of markets

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The Sacred Value Protection Model (SVPM) proposed that taboo trade-offs evoke a strong moral reaction in people who resist secular encroachments on their sacred values. It is also suggested that a substantial minority of participants are susceptible to trading off their sacred values when exposed to reframing strategies which convert taboo trade-offs into routine or tragic trade-offs. This suggests that the sacred-secular barrier is quite permeable. The present study examined these key issues using a sample of one hundred university students. Participants evaluated both routine and taboo trade-offs as well as being asked to re-evaluate their reactions after considering policy revision material. It was found that taboo trade-offs do elicit strong moral reactions in participants. In particular, participants expressed significantly greater moral outrage when contemplating taboo trade-offs compared to when thinking about routine trade-offs. The study also found that reframing taboo trade-offs as routine trade-offs was not effective in subverting sacred values. Specifically, taboo trade-offs were reframed using policy revision information that was designed to alleviate concerns about the possible extreme consequences that result from allowing taboo trade-offs to occur. Following exposure to the policy revision information, participants were asked to re-evaluate the permissibility of taboo trade-offs and no significant reduction in moral outrage was found. The results of this study are in contrast to other related studies in that the policy revision material did not change the reaction of participants and yet similar levels of moral outrage were elicited. Further refinements to the policy revision material component are outlined based on relevant models of the underpinnings of sacred values.

Keywords: *sacred values, moral reactions, taboo trade-offs, reframing strategies, sacred-secular barrier*

Taoists' personality characteristics and its relation to their subjective well being

XIAOJUN, L. (Hua Zhong Normal University), ZONGKUI, Z. (Hua Zhong Normal University)

The purpose of the study was to understand Taoists' personality characteristics and their relation to subjective well-being (SWB), and by comparison, to offer reference for modern people's lives. Sociometric rating and questionnaire methods were applied in this study. The Cattell Sixteen Personality Factor Questionnaire (16PF) and Satisfaction With Life Scale were used to conduct a survey of 33 Taoists from Wudang Mountain Taoists' College of Hubei Province. The data were mostly analyzed by MANOVA using SPSS12.0. The results indicate that: (1) Taoists' scores in reasoning, emotional stability, rule-consciousness, social boldness and perfectionism were significantly higher than those of university samples; while their scores in liveliness, vigilance, openness to change and self-reliance were significantly lower than those of the university sample; (2) Taoists' scores in life happiness ($t = 2.95, p < 0.01$) and positive emotion ($t = 3.55, p < 0.01$) were both higher than those of the university sample; while their scores on negative emotion were not significantly different from that of the latter; and (3) The regression analysis showed that emotional stability, apprehension, vigilance and tension all entered in the regression equation of Taoists' SWB. From these results can be drawn the following conclusions: (1) Taoists' personality characteristics are significantly different from those of general university students on a number of dimensions; (2) the degree of life satisfaction and positive emotion of the Taoists are higher than those of the general university students; and (3) the four factors; emotional stability, apprehension, vigilance and tension are predictably important to Taoists' SWB.

Keywords: *Taoist, personality, well-being, satisfaction, 16PF*

Teachers' agency in professional development: Its constructs, characteristics and developmental mechanisms

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In the field of teacher education, teachers progress from a passive development stage to an active development stage. During this transformation, the degree to which teachers can exercise their agency is critical. The purpose of this study is to theoretically explore the role of teachers' agency in professional development, including its definition, construct, function, consequence, development and predictors. With the base of theoretical construction, the current study used interview and questionnaire methods and the author conducted the study with a sample of 522 elementary school teachers from four provinces in mainland China. The purpose of the study was to examine the role of Chinese elementary school teachers' agency in their professional development. The Teachers' Agency in Professional Development Questionnaire included two dimensions: personal agency and contextual agency. The questionnaire was shown to possess good construct validity by confirmatory factor analysis, acceptable criterion validity and good internal reliability. The mean of Chinese elementary school teachers' agency in professional development is in the moderate level. The Teachers' personal agency score is statistically higher than their contextual agency score. For teachers with more than ten and less than twenty years of work experience, their personal agency score was statistically higher than teachers with less than ten years of work experience. The expert teachers' personal agency score was higher than that of experienced teachers and novice teachers; their contextual agency score was higher than that of experienced teachers. Teachers from rural key schools all scored higher on their personal agency and contextual agency than did urban key school teachers and rural ordinary school teachers. Teachers who had made master goals all scored higher on personal agency and contextual agency than did teachers who had made performance goals and teachers without

goals. Compared with the low agency teacher group, the high agency teacher group had two more predicted paths that influenced their personal agency. The first is from environmental factor supports to teacher perceived efficacy. These factors are mediated by teacher professional developmental satisfaction and then from teacher perceived efficacy to teacher personal agency. The second is from general personal agency to teacher perceived efficacy mediated by teacher professional developmental values, and then to teacher personal agency. Compared with the low agency teacher group, the high agency teacher group had two more predicted paths that influenced their contextual agency. First, from general contextual agency to teacher contextual agency directly, and second, from general contextual agency to teacher contextual agency mediated by teacher perceived efficacy.

Keywords: teacher development, personal agency, contextual agency, perceived efficacy, developmental satisfaction

Teachers socialization and job satisfaction: A field study from Chinese kindergartens

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Previous research has well documented that teacher socializations are positively correlated with teachers' job satisfactions (JS). However, most of these researchers focused on job satisfaction for the job itself and excluded other job aspects like supervisors and colleagues. In addition, most of them aimed at teachers from primary or middle schools and little is known about teachers from kindergartens. Regarding these, this research treats JS as a multidimensional structure and explores its relations with the socialization process. Three hundred and twenty seven teachers from 11 kindergartens in Tianjin, China, participated in this research. The socialization degree was measured by Content of Teacher Socialization Questionnaire, which included four dimensions (organization, organizational politics, role and task), and JS were measured with the Job Satisfaction Survey, which described job from nine aspects (reward, promotion, supervisors,

interests, colleagues, job itself, personal interaction, et al.). Multivariable regression technique was used to analyze data. The results showed that: (1) Knowledge of kindergarten teachers about their organization was positively related with each dimension of JS; (2) task mastery of kindergarten teachers correlated positively with work fairness factors like reward, promotion, procedure et al., but negatively with interpersonal factors like supervisors, colleagues et al.; (3) role clarity only had positive correlations with interpersonal factors; (4) knowledge about organizational politics only had negative correlations with contingent reward. The relations between JS and socializations depend on the contents of each variables and the well accepted conclusion that the better teachers are socialized the higher their JS, is not always the case.

Keywords: *teacher socialization, teacher job satisfaction, organizational politics, kindergarten teachers, task mastery*

Teachers' burnout and job satisfaction: Based on data from rural China

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The professional existence actuality of primary and middle school teachers in rural areas of central China was investigated in this study. Meanwhile, the developmental trend of professional existence actuality between pretest and protest had been explored. Participants were 1312 teachers and 1791 principals from primary and secondary schools in rural areas of central China, who completed the Job Burnout Questionnaire, the Professional Satisfaction Questionnaire and the Teachers' Evaluations Questionnaire. Longitudinal tracking research design (interval time was 12 months) was employed in the present study. The data were mostly analysed by t test and MANOVA. The results indicated that 1. In China, three dimensions of job burnout of primary and secondary school principals in rural areas were significantly lower than the general level; the degree of job satisfaction was high (67%), but satisfaction relating to wages and treatment were significantly lower than the general level at only 14.5 percent; 2. Rural primary and

secondary school teachers' degree of professional satisfaction and evaluations of interpersonal relationships (71.4 %) were high, while the degree of satisfaction relating to their income and welfare (5.1%), promotion chances (7.5%), social status (10.6%) and their schools (27%) were all significantly lower than the general level. 3. The two results showed consistently that the job burnout of principals was low, their degree of professional satisfaction was high, but they were discontented with their promotion chances. Conclusions that can be drawn from the study are 1. Using job burnout and degree of professional satisfaction as indicators, the professional existence actuality of primary and secondary school principals and teachers in rural areas of central China was good in general; and 2. The existence actuality of principals and teachers presented a downward trend.

Keywords: *teachers, burnout, job satisfaction, China, rural*

Teachers' experiences of job satisfaction and work-life balance: The mediating role of motivation and support

HUMPHRYS, K. (Griffith University), BROUGH, P. (Griffith University)

Teaching is an emotionally labour intensive job which requires individuals to engage in nurturing / social behaviours while negotiating professional and bureaucratic guidelines. As a result, the motivation to teach, and the support the networks developed, may play a role in teachers' experience of job satisfaction and work-life balance. This study aims to test the theory that resources such as motivation and support (supervisor, colleague, family and friend) actually mediate the relationship between job demands and involvement, and job satisfaction and work-life balance (WLB) as opposed to the traditional associations suggested by demands-resources or person-environment fit models. Five hundred and seventy members of the Queensland Teachers' Union responded to a survey on Teacher Demands and Work-Life Balance. Work demands, Job involvement, Motivation, Support, Job satisfaction and WLB were measured (Boyer, Carr, Mosley & Carson, 2007; Canman, Fichman,

Jenkins & Klesh, 1983; Kanungo, 1982; O'Driscoll, Brough & Kalliath, 2004). Preliminary analyses were run using hierarchical regression to examine the relationships between Job demands, Job involvement, Motivation, Support, Job satisfaction and WLB. In addition, Structural Equation Modelling (SEM) was used to further assess the mediating role of motivation and support in the theorized model. As predicted Job demands and Job involvement were significantly associated with Job Satisfaction ($F(2) = 70.7, p < .001$) and WLB ($F(2) = 3.29, p < .05$). Motivation and supervisor support significantly mediated the relationship between demands / involvement and Job Satisfaction ($\beta = .178, p < .001$; $\beta = .238, p < .001$, respectively). As such, the overall models incorporating motivation and supervisor support yielded good fit ($\chi^2(1) = .009, p = .925$; $\chi^2(1) = .018, p = .893$, respectively). No mediating effects were found for the relationship between demands / involvement and WLB or for colleague support, family support and friend support. While the data reported here is cross-sectional, Time Two data collection is currently underway and results will be tested and reported over time. The findings from this study contribute to the modelling of organizational and individual outcomes such as job satisfaction and work-life balance, specifically for professions where the boundaries between work and home are blurred. In contrast to traditional theories of demands, resources and outcomes, this study suggests that resources such as motivation and supervisor support actually act to mediate the relationships between demands and outcomes.

Keywords: teaching, work-life balance, job satisfaction, teacher demands, job support

Teachers' experiences of long term use of Lions Quest SEL program

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We interviewed teachers who have long, multi-year experience in using the Lions Quest (LQ) social and emotional learning (SEL) program at school. The aim was to describe and understand how teachers perceive the LQ program and achievement of its educational goals. Several research syntheses and meta-analyses of SEL

interventions have concluded that programs concentrating on socio-emotional competencies can result in gains that are central to the goals of all schools. However, we do not know if the skills transfer to the practice situations and what the experiences of long term use of SEL programs are. LQ curricula focuses on training of interaction skills, service-learning, and violence and substance abuse prevention. It is based on the values of equal rights, respect for the needs of others, and cooperation and peaceful resolution of conflicts. LQ is international, widely known and has been available for over 20 years. Teachers and LQ instructors (12 women and 3 men) who had long experience in using LQ program at school were interviewed. The teachers worked in elementary, lower secondary and upper secondary schools. Thematic interviews were transcribed (116 pages) and processed using qualitative, inductive content analytical procedures. The themes extracted include perceived effects of the program at the individual, class, school and communal level. At the individual level, students learned empathy and expression of emotions. They started to support each other, and become able to make decisions and solve problems themselves. Teachers learned new tools for classroom management, problem solving, giving feedback, and working with groups. The program changed their values and behaviour to be more student centered. At the class and school level, teachers perceived that group safety and ability for collaboration increased. The participants were a selected group of teachers who had used LQ for many years. Consequently, their perceptions of the effects of the program were positive. However, the experiences of teachers offer significant insider's view on the perceived long-term effects of LQ program on children and the whole school community. The results can be useful in planning SEL interventions and measures to study the effects of these interventions.

Keywords: social and emotional learning, socio-emotional competencies, schools

Team work with members from different cultures and disciplines at university

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The aims of this research were to investigate first year webdesign students' approach to team work, their team work preferences and their experience of team work, and to identify strength and weaknesses of working in teams in the university environment. In particular the role of working in cross cultural and cross discipline teams was investigated with regard to communication, task management, relationships and culture. The cohort of first year webdesign students in the School of Information Technology and Electrical Engineering at Queensland University participated in the study in semester one 2009. As part of the course requirement students completed online questionnaires regarding their attitude to team work at the beginning, in the middle and at the end of the semester. In the questionnaires the students rated various team work attributes. In addition after the submission of their questionnaires students within their team and as a team completed an analysis of their team health with regard to individual team members' survey ratings. At the end of the semester students were also asked to submit an individual reflection on their team work experience. The responses of 280 students were used in a quantitative and qualitative analysis. There were 126 female and 141 male students, while 25 did not indicate their gender. The webdesign course was undertaken by students from various disciplines, such as Information Technology, Communication, Multimedia, Arts and Journalism. The majority of students were aged under 20 years and indicated to be Australian. There was however a large number of international students in the course and most students were working in teams with members from other cultures and other disciplines. The ratings of students working in cross discipline teams were generally higher than those working in teams from a single discipline, indicating greater awareness of team work attributes. However the ratings of students in cross cultural teams did not differ from those working in all-Australian teams. It was concluded that students are capable of working well with members from other cultures and are effective in their teams. Students effectively address issues regarding communication, task management, relationship building and culture in cross cultural teams. However, to be successful in their team work when working with

team members from other disciplines, students needed to address various team work issues, such as task plan clarification and team member responsibilities.

Keywords: university students, team-work, cross-cultural, cross-discipline

Terror management and implicit group identification: The effects of mortality salience on overlapping mental representations of self and ingroup

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In this article, we test the prediction derived from terror management theory that mortality salience would increase self-ingroup overlap. The theory provides the notion that people support their cultural worldview when mortality is salient. Although previous research has established death-related thoughts led to positive evaluation (Greenberg, Pyszczynski, & Solomon, 1990) and explicit identification (Harmon-Jones, Greenberg, Solomon, & Simon, 1996) toward ingroup, it remains unclear how they implicitly identify their ingroup under the fear of death. The present research addresses this question about overlapping mental representations of self and ingroup. Specifically, our prediction is that mortality salience would result in enhanced implicit ingroup identification in minimal groups. Thirty-nine undergraduates participated in the experiment. They completed the computer-based tasks, which consisted of personality questionnaires and a response time task. Half of the participants were reminded of death-thoughts, and the other half answered questions about their eating habits. Later, they were categorised into two groups ostensibly based on art preference (Tajfel, Billig, Bundy, & Flament, 1971). Following this minimal group procedure, they rated 60 trait descriptions about self, ingroup and outgroup. Participants next completed the response time task on the same traits, indicating whether or not a presented trait was characteristic of ingroup and outgroup members, respectively. If judgments on the group are facilitated by matches with self-judgments and inhibited by mismatches, it is interpreted that mental representations of the two concepts are overlapping (Smith & Henry,

1996). In this study, response time facilitation was calculated by subtracting responses for self-group matching traits from responses for mismatching traits based on questionnaire ratings. We then conducted a 2 (MS: mortality salient vs control) x 2 (target: ingroup vs outgroup) x 2 (valence: positive vs negative) analysis of variance with repeated measures on the last two factors. This analysis found a main effect for target ($F(1, 37)=3.24, p<.10$), and the predicted interaction for MS x target ($F(1, 37)=6.32, p<.05$). Pairwise comparisons revealed mortality salience increased self-other overlap only in the ingroup condition. Response time analysis showed ratings of self-ingroup matching traits were faster when mortality was salient. This result is in line with our hypothesis that mortality salience increases self-other overlap to defend their cultural worldview. The use of minimal group could be taken as evidence that people identify with even a new group in the presence of mortality salience. Since participants were given no information about their ingroup, self-ingroup overlap indicates that self conceptions are applied to ingroup conceptions (Cadinu & Rothbart, 1996). Future research needs to replicate these findings and further investigate self-other relationship under a group setting.

Keywords: *terror management theory, group identification, mortality salience, ingroup, minimal group*

The 1-2-3 Magic Program: Mid-term outcome of implementation in the home

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The aim of this project was to establish the outcomes for both parent and child of implementation of the *1-2-3 Magic* program (a brief parenting intervention; Phelan, 1984) in the home. Empirical evidence suggests a robust link between negative parenting techniques and attitudes and the development of child behaviour difficulties (Smith & Farrington, 2004). The *1-2-3 Magic* program aims to provide parents with positive techniques that facilitate successful child rearing and prevent the

development of behaviour difficulties. Whilst the program has been available in Australia for some time and efforts have been made to establish short-term outcomes associated with its implementation in the home (e.g. Bailey et al., 2009), longer-term outcomes remain largely undefined for Australian families. This paper reports the mid-term findings from a project designed to address that situation by conducting the first longitudinal evaluation of the *1-2-3 Magic* program using an Australian sample. Families with a child aged 6-12 years participated in a controlled trial of the intervention program. Parents/caregivers of those families were randomly assigned to either an immediate treatment group, or a wait-listed control group. Parents/caregivers in the treatment group began immediately a practitioner-directed education course, consisting of two 3-hour group sessions. The control group commenced training subsequent to the first follow-up assessment, after an interlude of two months. We report here data pertaining to the 8-month, post-intervention follow up and discuss mid-term outcomes for both parent/caregiver and child following implementation of *1-2-3 Magic* in the home. For parents/caregivers, trends in levels of parental stress, confidence in parenting ability and use of positive parenting techniques over time will be discussed. For children, medium-term trends in behaviour change will be presented. The present study provides further insight into the suitability of the *1-2-3 Magic* program as an intervention for Australian families. The potential benefits of the intervention as an 'entry-level' parenting program are also discussed. Ongoing research is focused on establishing the long-term outcomes associated with the implementation of the *1-2-3 Magic* program in the home.

Keywords: *positive parenting, parenting intervention, child rearing*

The antecedents and impact of organisational identification after a university merger

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Employee's identification with the organisation has been recognised as an important and critical

factor for understanding organisational behavior (Lee, 1971; Ashforth & Mael, 1989). Organisational identification will be even more important after a merger. University mergers have been a hot topic and phenomena in the last two decades in China, yet few empirical studies have studied the merger's impact. In this paper, we look at the antecedents and impact of organisational identification after a university merger. This paper has two studies. In the first study, one university merger was used as the study focus and 119 employees and faculties were surveyed on their organisational identification with the former and new organisations, their organisational commitment, social accounts and satisfaction with the merger. Meanwhile, supervisors were asked to evaluate the performance of those employees and faculties. In study 2, an experimental method was used to see if there were priming effects of identifications with the former and new organisations. The first study showed that: (1) satisfaction with the merger and social accounts were antecedents of organisational identification with the new organisation; (2) the identification with the former organisation significantly influenced the after-merger job performance, while the impact of the identification with the new organisation on job performance was moderated by organisational commitment. The findings of the experiment revealed that the priming effect of the identification with the former organisation was not significant while the identification with the new organisation could be primed. This finding has some implication for how to foster identification with the new organisation after a merger. Social account and satisfaction with the merger are antecedents of post-merger organisational identification. Organisational identifications with the former and new organisation have different mechanisms on the post-merger job performance and the identification with the new organisation could be primed.

Keywords: *organisational identification, university merger, post-merger performance, priming effects*

The assessment of posttraumatic stress disorder in emergency service workers

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Emergency service workers are routinely exposed to distressing events. As a result, the management of compensation claims related to the development of posttraumatic stress disorder (PTSD) is an important issue for emergency service organisations. The aim of this study was to review the quality of the diagnostic assessment reports prepared by clinicians who had assessed emergency service workers in connection to a PTSD related workers compensation claim. Access was granted to the files relating to a group of Australian emergency service workers who had made PTSD related compensation claims and the assessment reports were evaluated relative to the diagnostic criteria for PTSD in the DSM-IV-TR. Assessments were conducted by psychologists (80%) and psychiatrists (20%). In the majority of cases (81%), the assessor determined that the worker was suffering from PTSD but only one report met the minimum standard in that it showed evidence that all symptoms were (a) assessed (the assessor asked the claimant whether they had experienced the symptom); (b) justified (the report included examples provided by the claimant); and (c) endorsed (the claimant stated that they had experienced the particular symptom). Only one third of assessors' reports addressed the possibility of malingering. This study suggests that the assessment reports fail to meet minimum assessment standards based the DSM-IV-TR. The implications of these findings are discussed in relation to both the welfare of the emergency service workers and their employers' management of compensation claims.

Keywords: *post-traumatic stress disorder, emergency workers, malingering, workers compensation, workers welfare*

The challenges and successes of psychological service delivery to rural South West Queensland

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General Practitioners and mental health clinicians recognise and acknowledge the expertise of psychologists in the diagnosis and management of the full range of mental health problems. This presentation highlights the challenges of recruiting and retaining sufficient numbers of psychologists by a particular service provider, while also outlining a particularly effective strategy implemented over the past decade. Continuing difficulties are identified with some options suggested as part solutions. Data is presented illustrating the scope of the challenges faced: nature and extent of mental health problems; scale of demand and geographic are covered; comparative research involving other service providers. The organisation has been recruiting and employing qualified and experienced psychologists for South West Queensland region for the past 13 years. The challenge to the organisation to offer effective and continuous services hinges on the difficulties of recruitment and retention of staff in these areas. The practice of sponsoring psychologists from abroad, who meet the standards of the Australian Psychological Society as well as the Queensland Board of Psychology, has proven to be an effective strategy. This has allowed for effective service delivery in this region as described by the community, GPs and consumers in a recent survey. Service delivery remains a challenge due to numerous reasons to be explored. Of particular note is the challenge of managing a situation in which overseas-trained psychologists with a particular cultural orientation are required to serve an ever changing multi-cultural population in the South West Queensland region. A future based exploration of ways to support these psychologists—personally and professionally—whilst delivering an effective service within this multicultural environment is outlined.

Keywords: *diagnosis, general practitioners, overseas-trained psychologists, recruiting psychologists, psychological service providers*

The childhood neurodevelopmental precursors of schizophrenia: A review of longitudinal high risk studies

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The aim of the present brief oral presentation is to quantitatively review prospective high risk longitudinal studies ascertaining the childhood neurodevelopmental precursors associated with schizophrenia. In addition, the current presentation aims to explore essential research questions such as whether the observed neurological, neuromotor, neurocognitive, social and behavioural deficits present prior or post diagnosis? Do they represent a continuous developmental decay? To what extent these neurodevelopmental deficits are sensitive and specific vulnerability markers for schizophrenia? This presentation evaluates the findings of 18 high risk studies and quantifies the factors that significantly differentiate between high risk and normal control children. Inclusion in the review was determined by several criteria. The results are presented under obstetric, neurological and neuromotor, cognitive, social and behavioural domains. In addition, the identified discriminating variables are presented in accordance with childhood developmental stages and relative to their effect sizes. The strengths and limitations of the studies and measurements are discussed. Additionally, recommendations for further studies are provided to strengthen the research methodology by using standardised neuropsychological measurements in order to acquire results that are true positive (specific to the development of schizophrenia), replicable and statistically significant. The accurate identification of predictive neurodevelopmental precursors of schizophrenia provides valuable insights regarding the developmental pathways of schizophrenia spectrum disorders. Indeed the identification of childhood neurodevelopmental variables may be markers of genetic liability to schizophrenia. In addition, the true positive identification of these endophenotypes is a major advancement in scientific knowledge guiding the development of effective early preventative intervention programs.

Keywords: *childhood neurodevelopment, schizophrenia, interventions, development*

The condition of Chinese adolescents' parental monitoring and its effect on their social adjustment

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This study aimed to extend the former construct of parental monitoring to three factors: parental knowledge, negative feedback and autonomy granting, as well as to explore the condition of Chinese adolescents' parental monitoring, its effect on their social adjustment, and the moderating effect of Neuroticism. A total of 2340 students participated in this study. Parental Monitoring Questionnaires, Adolescents' Social Adjustment Assessment Questionnaires and NEO-R were used. The results showed that: (1) there were significant differences between grades and sex in adolescents' parental monitoring. That is, parental knowledge about girls was significantly higher than boys, the negative feedback of boys was significantly higher than girls; parental knowledge and autonomy granting of children from lower grades was significantly higher than those from higher grades, and negative feedback of Grade Eight was significantly higher than Grade Ten and Grade Eleven. (2) The adolescents' parental monitoring could be categorized by three styles, including democratic, controlling and Laissez-Faire, whose proportion were 38%, 30% and 32%, respectively. (3) The three styles differed significantly in all aspects of adolescents' social adjustment. (4) Neuroticism served as a moderating factor in the relationship between parental monitoring and negative social adjustment. In general, results demonstrated that the condition of Chinese adolescents' parental monitoring is balanced. The effect of parental monitoring is moderated by adolescents' neuroticism character.

Keywords: parental monitoring, parental knowledge, parental negative feedback, adolescents' neuroticism, adolescents' social adjustment

The construction of an off-line meta-cognitive regulation test and its application on personnel selection

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Higher level processes such as monitoring and controlling of cognitive behavior have been pervasively emphasized in recent years, and meta-cognitive regulation was regarded as one of the hot points of contemporary psychological studies. The significance of scientific research on meta-cognitive regulation is momentous both in theoretical and practical fields. According to the object, area and time of regulation, meta-cognitive regulation could be decomposed into two components: on-line regulation and off-line regulation. On-line regulation happens during a certain task, while off-line regulation takes place out of a certain task situation. The purpose of the present study was to explore the psychometric structure of off-line meta-cognitive regulation, and to construct an assessing instrument with high criterion-related validity. The data of this study were collected from a large-scale Information Technology company in China. In Study One, 260 employees participated in the preliminary test. By using a self-developed questionnaire, a three-factor structure of off-line meta-cognitive regulation was obtained, which included global-planning, insight and generalization. After a retest study with 115 participants, the structure of off-line meta-cognitive regulation was confirmed. In Study Two, in order to examine the criterion-related validity of the off-line regulation questionnaire, hierarchical linear regression and hierarchical logistic regression were conducted by the researcher. The following findings were obtained: The managers are different from the common staff in particular regulation factors. Managers have a higher generalizing level than others in sales departments, while managers in support departments have higher insight levels than others. On the other hand, for common staff, the level of off-line meta-cognitive regulation fails to predict employees' performance in the sales department. However, for staff in the support department, level of global-planning predicts the creative activities reversely. According to the results, we may suggest that the off-line meta-cognitive regulation questionnaire has good psychometric qualities, and the procedures of administrating and scoring are objective and standardized. It can be applied to practical use such as personnel selection and promotion.

Keywords: *higher level processing, controlling cognitive behavior, meta-cognition, on-line and off-line cognitive regulation, personnel selection*

The contextualised assessment tool for risk and protection management: Validation and evaluation of a scale for examining the strengths of youth at-risk

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The Contextualised Assessment Tool for Risk and Protection Management (CAT-RPM) is a 95-item on-line tool that aims to identify risk and protection across six domains (self, family, school, peers and leisure, community, and significant life events) in at-risk youth. Items target information about the operating frameworks, relationship base, and leisure time activities of participants in these six domains, and a visual representation of the balance of risk and protective factors emphasises the young person's strongest domain. Cultural relevance to Indigenous young people has also been taken into account. The present research investigated the reliability and validity of the CAT-RPM with Australian high school students aged 12 to 18 years. In total 387 participants (196 males and 169 females, mean age of 14.95 years) from nine high schools across three states in Australia participated in the trial of the CAT-RPM. Using the school's Index of Relative Socio-Economic Disadvantage (IRSED) rating as a guide, participants who attended schools located in a range of socioeconomic areas were recruited. Participants completed the tool on-line during class times using the school computer facilities. Principal Components Analysis forcing two factors was conducted to determine the content validity of the instrument. Levels of risk and protection were measured according to a process of weighting the severity of items and establishing their multiplicity. Psychometric properties of the on-line tool were sound with adequate alpha levels for the various scales. To establish whether there were differences in risk and protection management among males and females, Indigenous and non-Indigenous, and junior and senior school students, t-tests were conducted. The final product is a strengths-based, culturally relevant assessment tool with

strong psychometric properties, measuring the balance of risk and protective factors for at-risk youth. The CAT-RPM can assist both professionals and young people in identifying optimal support networks and most appropriate interventions to facilitate change. It is useful in a case management model of assisting young people at risk.

Keywords: *at-risk youth, contextualised assessment tool for risk and protection management, relative socio-economic disadvantage, youth risk severity, youth protective factors*

The dark side of leadership: Prevalence of potential leadership derailers in a management population

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Currently there is a paucity of research on the 'dark side of leadership'. Potential derailers might achieve short term objectives but can, over time, lose the support of colleagues and subordinates and potentially lead to serious problems in the workplace. This study will analyse the prevalence of extreme preferences toward derailment behaviours and the relationship between personality and motivation drivers with the use of these quasi-leadership tactics. De-identified archival data on the leadership profiles of 301 executives, managers and line managers (193 males and 108 females), across a range of industries and occupations, were used. Two-hundred and eleven were from the private sector and 90 from public sector. The majority of participating managers were Australian, with a small proportion from New Zealand, United Kingdom, South Africa and Asia. The data were collected for the purposes of selection, promotion and/or leadership development. The Global Personality Inventory (GPI) (Schmit, Kihm & Robie, 2000), an on-line self report leadership profiling tool, was used, and responses were scored against the appropriate management norm, using proprietary software. The independent variables were: Achievement Drive, Affiliation, Socialised Power, Personalised Power and Self Management. The dependent variables were Prevalence of leadership derailers, e.g. ego-centred, intimidating, manipulating,

micromanaging and passive-aggressive. This data supported the hypothesis that there is a significant proportion of the management population who are likely to use quasi-leadership tactics to achieve their objectives. One-hundred and eighty six (62%) reported a strong to extreme preference (seventieth percentile or higher compared to the norm) for using at least one derailing behaviour. Eighty two reported a strong preference to use at least one derail; 49 reported a strong preference to use at least two derailleurs; 35 reported a strong preference to use at least three derailleurs; 12 reported a strong preference to use at least four derailleurs; and eight reported a strong preference to use all derailleurs. Using correlation analyses, significant relationships were found between all independent variables and the dependent variable, in the predicted direction. These results confirm there is a significant prevalence for using potential leadership derailers in this management population, supporting the need for further study into the variables leading to and the impacts of derailleurs on leadership style.

Keywords: leadership style, management, leadership derailleurs, Global Personality Inventory

The development and evaluation of crisis communication training for health professionals

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The aim of this research was to examine the structure and outcome of a crisis communication training program for health professionals. Despite the attention paid to health crises in recent years (e.g. outbreaks of E-coli and swine flu), relatively little attention has been paid to communication skills in general, and the crisis communication skills in particular, of health professionals. Poor communication can lead to fiascos during crises. The author and colleagues have been developing and evaluating a training program in this area. Twenty-five officials of a Japanese ministry voluntarily participated in the training. The program consisted of five sessions, which occurred approximately monthly. Each session began at 18:30 in the meeting room of

the ministry and ended at 19:30. Effectiveness was evaluated in terms of changes in cognitive complexity, changes in confidence in communication skills, and perceived need for training in communication skills. Independent evaluators (i.e. medical doctors and a journalist) also observed participants and evaluated their performances. No significant changes in cognitive complexity were found. However, confidence in communication skills increased slightly, and perceived need for communication skills increased. In addition, the independent observers noted the active engagement of participants in the training and commented favorably about the relaxed atmosphere during training. We expected that cognitive complexity would increase as the training proceeded. The absence of significant change in this regard is likely due to a self-selection bias. That is, the cognitive complexity demonstrated by participants at baseline was higher than expected, resulting in a ceiling effect. Relatively higher interest in crisis communication in this volunteer sample may have been associated with increased communication skills. Given the absence of similar training programs, these results underscore the relationship between training in communication skills and increased confidence in and perceived need to learn about communication skills. It is necessary to improve this training program so that the needs of health professionals and the public will be met in the event of health crises.

Keywords: cognitive complexity, communication skills, communication skills, crisis professionals, health professionals

The development and preliminary validation of a religiosity assessment instrument to be used in the Muslim population

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There has been increasing interest in understanding the role of religion in the lives of children and adolescents. The effectiveness of this research is constrained by difficulties associated with measuring youth religious involvement, particularly in the Muslim population. This study reports on the

development and validation of an assessment instrument targeted to measure religiosity in the Muslim youth population. Based on focused group discussion and consultation with religious leaders, 22 self rating items was developed to assess the engagement of Indonesian adolescents in practices prescribed by the Islamic religion. Separate scales were developed for males and females because of some gender differences in their prescribed practices. The instrument was administered to 134 males and 167 females in public middle and high schools. In addition, adolescent spirituality was also assessed using both self and parent reports. Measures of social competence and other related data were also obtained from parents, teachers, and peers. The internal consistency coefficients of the instrument were 0.89 for the male's measure and 0.87 for female's measure. The Multi Group Confirmatory Factor Analysis (MGCF) specifying invariant models for males and females fit the data well ($\chi^2 = 4.44, df = 11$). The correlation between adolescent ratings and those of their parents was 0.32 for religiosity and 0.26 for spirituality. Adolescent's self reports of religiosity also correlated significantly with adolescent's general self esteem ($r = .21; p < .001$), and child's sympathy and perspective taking ($r = .36; p < .001$), providing evidence of construct validity. A MGCF model specifying that spirituality and religiosity are represented as one latent construct fitting the data well: $\chi^2(17) = 21.61$, non-significant; Comparative Fit Index (CFI) = 0.97; Root Mean Square Error Approximation (RMSEA) = .04; Standardized Root Mean square Residual (SRMR) = 0.05. In contrast, the two factor model was rejected because of poor fit. The instrument can be used to effectively measure religiosity of Muslim adolescents and, therefore, can be used as a component of a multi-reporter and multi-instrument assessment of adolescent religious involvement. Furthermore, the results suggest that religiosity and spirituality overlap considerably in this sample. These findings are discussed in the perspective of future research related to youth religiosity.

Keywords: *religiosity, youth religious involvement, spirituality, self-esteem, perspective taking*

The development and validation of the Chinese Psychological Hardiness Inventory: An emic-etic approach

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The present study aims to develop and validate the Chinese Psychological Hardiness Inventory (CPHI). Hardiness is a global psychological quality theoretically defined as consistent pattern of behaviors, motives, and feelings where individuals view potentially stressful situations as normal aspects of life and opportunities for growth rather than threats (challenges), they keep believing in their own capability to change the situation (sense of competence), and can be involved in a social relationship (social commitment). The indigenously developed CPHI comprises 32 items with dichotomous scales originally drawing from the 541-item pool of Chinese Personality Assessment Inventory-2 (Cheung, Leung, Song, & Zhang, 2001). The scale was administered to about 100 Hong Kong college students, 1360 normative individuals and 730 psychiatric patients aged 18 to 45 from Mainland China and Hong Kong. All items in CPHI were checked and approved to be comprehensible by both mainland and Hong Kong Chinese. The CPHI showed high internal consistency, temporal reliability and valid factor analytic structure. Hierarchical regression analysis demonstrated the concurrent validity of the CPHI in predicting various aspects of life satisfaction after controlling for the effect of life stressors. Analysis of variance suggested the concurrent validity of CPHI, in which the hardiness level of the normative sample was substantially higher than that of the psychiatric sample. Logistic regression further established its incremental validity to predict suicidal tendency among depressive patients beyond the severity of depression. Norms of the CPHI was provided on the basis of over 1300 normative participants. The CPHI extends the foreign construct of hardiness (Kobasa, 1979) to collectivistic Chinese culture, and at the same time avoids the problems of translation and cultural irrelevance. It is a comprehensive, efficient, reliable and valid measure of hardiness

that taps the psychosocial adjustment level of Chinese under stress from a combined emic-etic approach.

Keywords: *Chinese Psychological Hardiness Inventory, hardiness, stressful situations, competence, depression*

The development of inequity aversion in Japanese children

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In this study, we investigated the developmental sequence of inequity aversion preference in Japanese children. Forty-nine Japanese elementary school children (aged 6 to 12) participated in the experiment. Each child was asked to allocate virtual tokens to himself/herself and to his/her partner (a graduate or undergraduate student). A pair of even and uneven token allocations was displayed on a touch-screen and the participants selected the pair of their choice. A total of eight pairs were displayed in a sequence; these pairs differed in terms of the absolute, relative, or joint amount of payoff. At the end of the experiment, tokens won by the participants through the series of choices were exchanged to stationery. A principal component analysis on the choices in the eight pairs extracted three principal components that accounted for 70% of the item variance. The three components consisted of the following types of pairs respectively: (1) The unequal allocations were advantageous and the payoffs obtained from them were more than those from the equal ones; (2) the unequal allocations were disadvantageous but the payoffs obtained from them were not less than obtained from the equal ones; and (3) the unequal allocations were disadvantageous and the payoffs obtained from them were less than those from the equal ones. A 3 (component) × 3 (grade group) × 2 (sex) ANOVA on the rate of equal choice revealed significant main effects of component and grade, and a component × grade interaction effect. In other words, participants in higher grades were averse to disadvantageous inequality even when they could obtain a larger payoff from it. Besides, participants showed a strong aversion to disadvantageous inequality with low payoffs

and reluctance to abandon advantageous inequality regardless of their grade. No other significant effects were detected. Our results revealed that the aversion to disadvantageous inequality showed a strong development with age; on the other hand, aversion to advantageous inequality remained at low levels. In conjunction with recent findings, the results of this study suggest that advantageous inequality aversion may be evoked selectively (i.e. only within ingroup members) and is scarcely developed among people in general.

Keywords: *inequity aversion preference, unequal allocations, inequality, ingroup members, payoffs*

The development of the perception of "overt" and "covert" prosocial behavior in Japanese children

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Although a large number of studies have investigated "overt" prosocial behaviour (e.g., helping, contribution), few have investigated "covert" prosocial behaviour (e.g., caring, waiting). Ninomiya (1993) suggests that teachers and nurses perceive covert behaviour as prosocial in Japan, however few studies have investigated covert behaviour in childhood. Therefore, the purpose of this study was to examine the development of perception of "overt" and "covert" prosocial behaviour and the correlation between the perception of each behaviour and empathy. Children aged 10 ($n = 97$) and 12 ($n = 80$) completed a 16-item empathy scale. They were asked about their "concern of empathy" and "perspective taking". Participants also responded to four prosocial episodes in which a friend was distressed. The characters in the stories were two helpers who are prosocial – one helped immediately (overt behaviour) and the other kept an eye on distress (covert behaviour). The questions about each of the characters concerned the degree of prosociability (8 items). An ANOVA showed that the 10 year-olds estimated the overt prosocial behaviours as being more prosocial than the covert prosocial behaviour and that the 12 year-olds estimated the covert prosocial behaviours as being more prosocial. In addition, for the 12 year-olds, the perception of covert prosocial

behaviours had significant plus correlation with “concern of empathy” and “perspective taking”. This effect showed few significant correlations. These data suggest that, in childhood, the perception of others’ covert prosocial behaviour is developmental. It appears that prosocial behaviours are variable in children. Yarrow et al. (1976) pointed out that prosociability appears not to be a unitary concept. Their report supports this study.

Keywords: *prosocial behaviour, overt behaviour, covert behaviour, empathy*

The differential impact of psychosocial and physiological factors on the self-management of type 1 diabetes in young people

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Attaining recommended levels of metabolic control can be a challenge for many people with Type 1 Diabetes (T1D). This is particularly so during adolescence due to the physiological and psychological changes taking place during this period. This study aimed to investigate the differential impact of psychosocial and physiological determinants of metabolic control. A sample of 158 Australians with T1D, aged 8 to 19 years, and their families, were recruited independent of their source of care as part of a longitudinal, cross sectional exploratory study. Data were gathered regarding demographic, physiological (self-monitoring of blood glucose, adherence to insulin regimen, rates of hospitalization) and psychosocial (negative affect, coping, self-efficacy and knowledge of diabetes) information. A capillary sample was taken for glycated hemoglobin (HbA1c) determination. Multiple regression procedures were performed, using backward elimination, to determine those factors contributing to metabolic control. Participants’ attitudes and beliefs about coping, negative affect and self-efficacy were significant predictors of metabolic control ($ps < 0.05$; adjusted $R^2 = .302$) and contributed more to the variance in the data than physiological measures such as self-

monitoring of blood glucose and rates of hospitalization ($ps > 0.05$). Adherence to insulin regimen was the only physiological measure to remain in the final regression model ($p = 0.007$). Young people with T1D reporting high acceptance and low avoidance behaviours, confidence in their ability to manage the condition, who are not depressed and who are adherent to their treatment regimen, are more likely to achieve acceptable levels of metabolic control. Research models incorporating both psychosocial and physiological markers of self-management of Type 1 Diabetes can provide a clearer view of those factors which are most important to achieving optimal self-management of T1D. Healthcare focusing on physiological self-care behaviours may not adequately address those aspects of T1D self-management that can have long term effects on health and quality of life.

Keywords: *type 1 diabetes, self-care, metabolic control, self-monitoring, self-efficacy*

The dual social impact of university outreach programs on enrollment in higher education

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In order to increase the enrollment of low socioeconomic status (SES) students with higher levels of ability in higher education, many universities and colleges initiate outreach programs. In spite of their popularity, little is known concerning the programs’ contributions and long-term effects. Based on a follow-up study of adolescents who were enrolled in such a program twenty five years ago, the current study addressed two questions: 1) Did participation in the outreach program lead low-SES participants to enroll in higher education? 2) To what extent did the participants attribute their present personal achievements to their experiences within the outreach program? Using several methods for data collection we were able to approach 198 adults who had participated (72%) in an outreach program 25 years ago, or who served as a comparison group (28%). These ex-students studied in two large high schools located in low-SES neighborhoods of metropolitan Tel-Aviv-Jaffa. The participants

completed questionnaires on various aspects of their participation in the program in the past as well as various aspects of their current life and self-perceptions. The findings indicate that currently (ex)participants in the program have more advanced academic degrees in comparison to non-participants. Moreover, interviews with a random sample of ex-participants show that those who have continued to higher education partially attribute their academic education to the outreach program in that it enhanced their confidence that higher education is attainable. However, those participants who have not been enrolled in higher education perceived it as their personal failure and lack of effort at school. No significant differences were found between these two groups in attitudes regarding the social and economic merits of higher education. Outreach programs might have dual social impact. On one hand they can significantly foster the enrollment in higher education of the low-SES population. On the other hand they might also operate as a social mechanism that preserves the prevailing social order, which favors the more advantageous groups in society. Namely, by attributing failure for not enrolling in higher education to personal capacities, the participants who did not continue to higher education legitimize social inequality.

Keywords: low socioeconomic status, university outreach programs, higher education, social inequality, failure attributions

The effect of coloured overlays on reading Japanese characters for Japanese students with/without Scotopic Sensitivity Syndrome

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Scotopic Sensitivity Syndrome (SSS) is also known as Irlen Syndrome. People with SSS perceive abnormal brightness and visual distortions from text while reading. In the present study, we conducted a survey on the prevalence of SSS in Japanese students. Since coloured overlays were reported to ease reading of English text (Irlen 2005; Wilkins 2003), we also examined whether the overlays of various colours could ease reading of Japanese text. In

the survey, 152 students (45 males and 107 females) completed a questionnaire, which contained the diagnostic criteria of SSS by Irlen Institute. The questionnaire included 14 questions regarding their reading and lifestyle. In the experiment, 33 students (13 males and 20 females) who participated in the above survey read Japanese and English texts with or without coloured overlays. Six students met the diagnostic criteria for possible SSS. The stimuli were 11 sets of 144 Japanese characters (Hiragana) in a 12 x 12 characters grid. The students read ten sets with coloured overlays (Irlen Overlay), and read one set without the overlay. The colours of the overlays were purple, peach, rose, orange, yellow, green, light blue, blue, bluish gray, and gray. After reading all the Japanese texts, they were asked to evaluate how easy they were to read with each coloured overlay by using the normalized ranking method. In the same way, they read English texts with or without coloured overlays, and evaluated how easy they were to read. In the survey, 36 students (10 males and 26 females, 23.7% of the total) met the criteria for possible SSS. In the experiment, light blue, bluish gray, gray, and green were ranked significantly more highly than the other colours ($p < 0.01$) by the normal students. The results were very similar for English characters. Light blue and bluish gray were also ranked highly in the six students with possible SSS. Interestingly, some students with possible SSS ranked blue and purple highly, although those colours were ranked low in the normal students. Our study suggested that approximately 20% of students may have SSS in Japan. Overlays in some colours may ease their reading.

Keywords: scotopic sensitivity syndrome, visual distortions, reading ease, colour overlays on text

The effect of distraction on forced-choice symptom validity tests amongst individuals with mild-moderate traumatic brain injury

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Measures designed to assess test-taking effort, called Symptom Validity Tests (SVTs), are critical for accurate neuropsychological assessment. It

has recently been suggested that some SVTs that purport to assess effort alone may actually require a degree of cognitive ability (Batt, Shores, & Chelachuk, 2008). Subsequently, these tests may misclassify truly impaired individuals as feigning or exaggerating, and thus may be unsuitable for use with impaired individuals. The present study compared the performance of Healthy Adults (HA; $n = 74$) to those with mild-moderate Traumatic Brain Injury (mmTBI; $n = 47$) on two well-validated SVTs: the Word Memory Test (WMT) and the Test of Memory Malingering (TOMM). These groups were further randomly allocated to one of three conditions: full effort (FE), full effort with distraction (FED) or simulated malingering (SM). SM groups were given instructions to feign impairment adapted from Tombaugh (1997). Conversely, the FE and FED groups were asked to optimize their efforts. In addition, the FED group completed an auditory distraction task during the learning phase of each SVT. Results indicated that participants in the FED condition had significantly lower scores on the WMT, but not the TOMM, when compared to those in the FE condition for both the HA and mmTBI groups. Participants in the SM condition scored significantly lower than both the FE and FED groups regardless of TBI history. With regard to classification accuracy, sensitivity was identical (88%) for the WMT and the TOMM in both the HA and mmTBI simulating groups. Only one (4%) of the participants across FE and FED groups was misclassified as giving sub-optimal effort on the TOMM (96 to 100% specificity). Conversely, false-positive rates for the WMT were unacceptable, with eight of 26 (30%) of HA in the distraction condition misclassified as giving inadequate effort, and 11 of 19 mmTBI (58%) in this condition similarly misclassified (42 to 70% specificity). The TOMM test results were consistent across FE and FED conditions, supporting it as a true test of effort, whilst the WMT produced unacceptable false positive rates under conditions of distraction and hence may not be suitable for use as a measure of effort for persons with significant cognitive impairment.

Keywords: cognitive impairment measures, neuropsychological assessment, cognitive ability, traumatic brain injury, symptom validity tests

The effect of intervening variables on strain for Japanese workers

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Coping, social support and social skill are known as intervening variables between stressor and strain. The purpose of this study was to examine which of those variables reduces strain the most and how stressor and intervening variables effect strain on Japanese workers. The participants were 241 Japanese workers (184 males and 57 females) who completed five questionnaires to measure stressor, strain, coping, social skill and social support. Factor analysis was conducted on stressor, coping and social support. Multiple regression analysis was used to examine how well strain can be predicted from other variables and factors. Finally, an unpaired t-test was used to compare the difference between male and female workers. As a result of factor analysis on stressor, six factors (overwork, role ambiguity, role conflict, job aptitude, evaluation and workplace environment) were extracted. For coping three factors (self-subjective type, avoidance type, others-subjective type) were extracted and for social support two factors (positive support, moralistic support) were extracted. Multiple regression analysis indicated that stressor significantly enhances strain while social skill reduces strain, however coping and social support were not significant predictors of strain. With regard to two factors of social support, the result showed that the positive support from fellow workers reduces strain. In contrast, it showed that avoidance type coping increases strain regarding three factors of coping. An unpaired t-test showed that male workers were more likely to feel overworked and role conflict, while female workers were more likely to feel workplace environment as a stressor. The results also showed that males tended to use self-subjective type coping and females tended to use avoidance type coping, and that males had higher social skill than females. These results suggest that social skill reduces strain the most among three intervening variables and that the positive support from fellow workers also reduces strain. In contrast,

avoidance type coping seems to increase strain. Finally, there seem to be sex differences in stressor, social skill and coping, which may mean that we need different stress managements for each sex.

Keywords: *stressors, strain, Japanese, coping, social skills*

The effect of invulnerability and Theory of Planned Behavior (TPB) on drinking and driving among young Chinese drivers

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Though scarcely studied, a large proportion of traffic accidents are alcohol-related and thus driving after alcohol use poses risk on both personal and public health in Chinese societies. Young adults are more likely to engage in drinking and driving and thus are of particular concern. The aim of this study is to investigate both the direct and indirect influences of the three Theory of Planned Behaviour (TPB) components (attitude, norm, behavioral control) and invulnerability, on young Chinese drivers' drinking and driving. This study is a self-administrated online questionnaire survey. The Chinese questionnaire template was created by an online survey program (www.surveymonkey.com), and the survey hyperlink was posted at popular Chinese public forums for young people in Macao. One hundred and twenty-four licensed drivers (aged from 19 to 35 years) fully completed the questionnaire online with informed consent of participation given. Among the respondents, 39% had driven after taking alcohol in that period of time. The results of correlation analysis showed that intention to drive after drinking was positively correlated with attitude, subjective norms, perceived behavioral control, invulnerability, and prior driving behavior after drinking ($p < .05$). The result of path analysis revealed the significant indirect effect of invulnerability on intention, through promoting a favorable attitude and a greater perceived behavioral control of driving after alcohol use. The present findings suggest that irrational beliefs of invulnerability to danger as well as the three TPB

components are potential targets in safety campaigns for Chinese people.

Keywords: *theory of planned behaviour, drink driving, risky driving behaviours, perceived control, alcohol use*

The effect of job stress on medical scheme claims and member well-being

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The aim of this research was to determine the impact of job stress on medical scheme claims and physical health risks. A measuring instrument embracing the job demands-job resources model was implemented in a closed medical scheme environment in the financial industry in South Africa. The member population of medical aid is 120 000. Participation was voluntary and a total of 3230 members completed the survey in a nine month period. Medical Scheme Insured Benefit claims data was available for the entire sample whilst objective physical health data was available for 1264 members. Physical health data included blood glucose and cholesterol levels, blood pressure, Body Mass Index, dietary index, exercise profile, and cardio-vascular disease risk. Firstly, structural equation modeling was used to fit the data to a conceptual model. Secondly, MANCOVA was used to determine differences in claims between risk factors while controlling for certain factors. Lastly, logistic regression was used to determine odds ratios for risk factors. Burnout, stress and associated distress states resulted from high job demands and low decision latitude and recognition. The relationships were moderated by perceived supervisory support at work. These work variables (demands and lack of resources) contributed to 62% of distress states, which in turn was responsible for 64% of stress-related ill health symptoms. Work variables (demands and lacking resources) were responsible for 40% of the stress-related ill health symptoms experienced by participants. Stress-related psychological ill health was the best predictor of medical aid claims. Members experiencing high levels of stress-related psychological ill health

symptoms claimed on average 3135.17 Rands (approximately 418.69 United States Dollars) more than members experiencing low levels of psychological ill health symptoms over a six month period. The odds of suffering from chronic medical conditions also increase substantially if high risks for burnout were evident. Members at higher risk of burnout also posed risks in terms of productivity, attendance levels, exercise, medicine usage, doctor visits, and being overweight. Strategically, ways to mitigate job stress (consisting of high job demands and a lack of job resources) in combating medical aid inflation should be facilitated. Employer groups are crucial and should act as strategic partners of the medical aid provider. This is mainly because job stress does not only affect medical expenses but also affect organizational effectiveness and competitiveness and the quality of life and health of members/employees.

Keywords: job stress, medical scheme claims, body mass index, organisational effectiveness, burnout

The effect of learning hydrocarbon covalent bond structural formulae by correct and incorrect combined worked-examples

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In previous studies, few researchers paid attention to the role of incorrect worked-example in worked-example learning. Furthermore, they drew different conclusions. We thought that the outcomes would be better when using the combination of correct and incorrect worked-examples compared with the correct worked-examples only in worked-example learning. This hypothesis was tested by three experiments in this research which used hydrocarbon structural formulas of organic chemistry as the materials. High school students from Grade One were recruited to participate in this research. Single-factor design was implemented in each experiment. All the hydrocarbon structural formulas were selected from a chemistry textbook of Senior Two level. A total of 293 subjects were assigned to the three experiments (79 participated in Experiment One, 116 participated in Experiment Two and 98

participated in Experiment Three). They all participated in the pre-test, worked-example learning, and the post-test in quiet classrooms. The results were the following: (1) Experiment One showed that the effect that combination of correct and incorrect worked-example learning was significantly better than single correct worked-example learning; (2) Experiment Two showed that the scores achieved from the combination group, which contained equal number of correct and incorrect worked-examples, were significantly better than the scores achieved from the combination group in which the number of correct worked-examples was larger than that of incorrect ones. At the same time, the scores achieved from the combination which contained equal number of correct and incorrect worked-examples were significantly better than the scores achieved from the combination group in which the number of correct worked-examples was smaller than that of incorrect ones (the proportion of correct and incorrect worked-examples was 2:6 or 6:2 in this study). In addition, the scores achieved from the combination group in which the number of correct worked-examples was larger than that of incorrect ones were higher than the scores achieved from the combination group in which the number of correct worked-examples was smaller than that of incorrect ones (but this was not a significant difference); (3) Experiment Three showed that the effect was most significant when correct and incorrect worked examples were matched; the effect obtained from the combination group in which correct worked examples were put before the incorrect ones was worse than the effect of the matched group; the effect obtained from the combination group in which correct worked examples were put after the incorrect ones was the worst. The conclusion derived from this study is that the learning outcomes could be promoted when using appropriate incorrect worked-example in worked-example learning.

Keywords: worked-example learning, correct worked-examples, incorrect worked-examples, learning outcomes, combinations of worked-examples

The effect of mindfulness training on performance in closed-skill sports: The power of mild acceptance

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The purpose of this experiment was to examine the effect of mindfulness training on performance in closed-skill sports, during which athletes have much time to reflect in between their physical activities. One experimental group was composed by 27 participants, who followed an eight-week course in mindfulness. It was compared with a control group of 36 participants who did not follow any training in mindfulness. In the pretest (that is, just before the start of the mindfulness course) and in the posttest (that is, after the end of the course, eight weeks later), participants completed three motor tests: a darts test, a golf putting test, and a sinusoid test. Repeated measures ANOVAs showed that the experimental group improved significantly more on the golf putting test than the control group. A similar result was found for the number of errors made on the sinusoid test. The order in which the tests were performed (first golf putting test or darts test) also had an impact. The experimental group that performed first the darts test improved significantly more in the number of errors, compared to the other groups. No significant group effects were found in the darts test, neither in the extent of errors on the sinusoid test. It is concluded that mindfulness might have a positive effect on specific motor skills in closed-skill sports. Further research is needed to corroborate these preliminary findings.

Keywords: mindfulness training, motor skills, closed skill

The effect of neighborhood crime prevention on public perception of crime

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This study examines the effects of neighborhood crime prevention on inhabitants' perception of crime and public safety in a suburb of Tokyo. A

questionnaire survey was conducted in November 2007 in Ichikawa city, Chiba. Data was obtained from a randomly-sampled of 1184 adults (aged 20 to 69). The questionnaire included the variables of seeing the patrol and crime map, as well as four outcome variables: perceived risk, fear of crime, evaluation of public order and residential satisfaction. Hierarchical multiple regression analysis revealed that civilian patrol is associated with higher perceived risk and lower residential satisfaction, whereas inspecting a crime map bulletin board was strongly associated with higher perceived public order and residential satisfaction. Fear was affected by neither the patrollers nor the crime map bulletin board. Civilian patrol seems to be successful in attracting public awareness of crime, whilst the intervention may undermine sense of community and residential satisfaction. Disseminating crime maps might help general public to adjust their perceived risk to objective crime rate.

Keywords: crime prevention, neighbourhood crime, fear or crime, community satisfaction, public order

The effect of providing information on increasing users of parking lots for bicycles: A single case study on a Japanese university campus

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Illegal parking of bicycles near the station, store and on campus is at issue in Japan. They are obstacles to the mobility of pedestrians and wheel chairs. Also, they damage the landscape of a community. Though much effort had been devoted to decreasing illegal parking, few empirical studies are available. The aim of this study was to increase the number of users of a bicycle parking lot from the applied behavior analytic perspective. The number of bicycles in a parking lot on the campus was measured over 6 weeks. Information was provided that included the time required to travel between parking lot and lecture room, with a campus map and the merit of using parking lots (e.g., secured parking). This information was provided through placards set in a campus, handbills posted to illegally parked bicycles, and the university website. Single case experimental design (ABC

design) was used to evaluate the effects of these interventions. Furthermore, parking lot staff assessed the social validity of this intervention by completing a 7-point scale questionnaire and free description. Providing information in the way this study used did not increase the number of users of the parking lot for bicycles. And although staff of the parking lot assessed the goal of this study as highly important, the result and appropriateness of the study's procedures were not satisfactory. Other subsidiary data was also obtained.

Keywords: information provision, bicycle parking, applied behavioral analysis

The effect of psychosocial factors on marital adjustment: An Indian perspective

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Marriage and family are not only optional, they are essential as they meet man's deepest need for companionship, affection and sexual expression (Kumar and Rohtagi, 1987). Veenhoven (1983) equated marriage to an indispensable heaven. Marriage makes a person feel wanted, needed, approved of, secure and complete to a degree which cannot be thought of in any other human relationship (Coleman, 1964). Adjustment state, in which the needs of the individual and the claims of the environment are fully satisfied, is the process by which this harmonious relationship can be attained (Eysenck, et. al., 1972). There are many psychological and social factors which can affect marital adjustment. Psychological factors including intelligence, self-disorder, interest, feelings, attraction etc., are the main features. Age, religion, income, education, etc. are considered social factors. The psychological factors selected for the study were self disorder and intelligence, and the social factors of age and income. Thus the aim of the study was to determine the relationship between psychosocial factors and marital adjustment and to investigate the relationship between psychosocial factors and marital adjustment. The sample consisted of 200 Indian couples from Bhopal and Jabalpur town in Madhya Pradesh, India. Randomly selected couples were divided

into two categories on the basis of their age. The first group was called lower age group (25-35years) and the second group was called the higher age group (36-50 years). To study the effect of psychological factors on marital adjustment three standardized tests were used – the Marital Adjustment Questionnaire (developed by Dr Pramod Kumar and Kanahan Rahetogi), the Self Disorder Inventory (developed by Veerendra Sinha), and the Raven Progress Matrices (developed by Raven). All three tests were administered on the 200 couples, who were asked to fill out their questionnaires independently and without discussing answers. There was no significant difference in the level of marital adjustment in the lower age group; however the higher age group showed nominal difference in the level of marital adjustment by gender. The difference was calculated in the level of self disorder of the lower age group. The self disorder was higher in wives compared to the husbands, whereas in the higher age group husbands disclosed themselves more than wives. The difference was found in both the groups for the psychological aspect of intelligence. Economic level plays an important role in marital adjustment. The psychological features play an important role in marital adjustment in all age groups in Indian culture.

Keywords: psychosocial factors, marriage, marital adjustment, Indian perspective

The effect of the gender composition of organisations on male and female perceptions of 'glass cliff' situations

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The glass cliff refers to the higher likelihood of women being placed in precarious leadership appointments during times of organisational crisis. The current study aimed to investigate male and female perceptions of the fairness, prevalence and problematic nature of glass cliff appointments and the extent to which these perceptions depend on the gender composition of an organisation. A 2 (gender: male and female) x 3 (gender composition of organisation: majority male, majority female or equal gender composition) between subjects design was used in this study. Two hundred and four participants,

comprising 139 women (mean age = 26.04, $SD = 7.32$) and 65 men (mean age = 28.66, $SD = 7.32$) each read a hypothetical glass cliff scenario depicting a female appointed to a leadership position in a time of declining organisational performance. Three scenario conditions were used which differed only in their description of the gender composition of the organisation, being either majority male, majority female or equal gender composition. Participants then responded to items measuring their perception of the general, distributive, procedural and interpersonal fairness of the appointment, and its prevalence and problematic nature. For exploratory purposes, a measure of modern sexism was also included. A MANOVA analysis conducted on the fairness measures revealed that although females found the glass cliff appointment more unfair than males on measures of distributive, procedural and interpersonal fairness, these differences were not found to depend on gender composition. Neither females nor males found the hypothetical appointment overall to be particularly unfair, prevalent, or problematic. Exploratory path analysis revealed that the obtained gender difference in fairness perceptions was mediated by levels of modern sexism. The present findings suggest that individuals do not find glass cliff situations to be unfair, prevalent or problematic, but that there are gender differences in the evaluation of the fairness of glass cliff situations, and these differences are related to modern sexist attitudes. However, there is currently little evidence that such differences depend on the gender composition of organisations. Furthermore, these findings suggest that neither females nor males may accurately perceive women's overrepresentation in the context of poor prior organisational performance, nor the potentially deleterious consequences they hold for female leaders.

Keywords: *glass cliff, leadership, fairness*

The effect the experiences of volunteer HIV counsellors have on their own well-being: A case study

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The aim of this qualitative interpretive research was to explore the experiences of HIV counsellors and how these experiences influence their psychological well-being. A case study design was used. In depth interviews were conducted with nine Sotho speaking volunteer HIV counsellors working in primary health care clinics in the Sedibeng region of Gauteng, South Africa. Additional data was collected through observation. Transcribed interviews were analysed through a process of open coding and these data were integrated with data from observations and literature to construct a textured description of the experiences of the participants in which the focus was on the psychological wellbeing of the volunteer HIV counsellors. The data indicated that the participants were not overwhelmed by the many stressors of their challenging occupations. They succeeded in developing their own ways of stress relief especially through the practise of their spiritual beliefs and other means like participating in community activities and meaningful relationships with significant others. They experienced personal growth and empowerment in general, but especially in the field of health and sexuality. The female participants were increasingly able to negotiate safer sex. Participants' lives were enriched through the regard they received from their communities, and being in a position to give information and advice they gained from their training and exposure to information. The participants experience feelings of self-worth in that they were able to contribute to their communities and this added meaning to their own existence. It became clear that their character strengths such as wisdom, courage, humanity, justice and transcendence enabled them to function and grow in their difficult situation.

Keywords: *psychological well-being, HIV, occupational stress, volunteer counsellors, stress reduction*

The effectiveness of systematic model interventions in decreasing schizophrenic patients' re-hospitalizations in Razi Psychiatric Hospital, Iran

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The aim of this research is to assess the effect of a systemic intervention model on reducing the frequency of re-hospitalizations in schizophrenic patients. This is applied research using a quasi-experimental method. The sample group includes schizophrenic patients in Razi psychiatry center and their families. The method of sampling is randomization. The intervention in the experimental group included: psychological training of families and psycho-social support services for patient after hospitalization. This research used Student's t tests, Chi-Square tests and Mann-Whitney U tests for data analyzing. The results showed that the use of a systematic intervention model has reducing effects pm the rate of schizophrenia patient's re-hospitalizations. The systematic intervention model effects schizophrenic patients, their families and their environments and improves the patient's quality of life and reduces the frequency of re-hospitalization.

Keywords: *systemic model intervention, schizophrenia, psychological training, psycho-social support, quality of life*

The effectiveness of two treatments to enhance academic self-concept of low-achieving secondary school students in mainland China

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This study is designed to investigate the effectiveness of internally-focused performance feedback and attributional feedback in enhancing academic self-concept of low-achieving junior middle school students who continue their study in secondary vocational education (SVE) of China. Participants were year-one SVE students who were once low-achievers in junior middle school. Three classes of students participated in the 16-week intervention program: two classes were experimental and one was acted as a control. One experimental class received the internally-focused feedback approach only and the other received the internally-focused feedback approach and

attributional feedback approach simultaneously. The control class received no treatment. The researcher-administered intervention significantly enhanced the targeted academic self-concept (English self-concept) and modestly enhanced Chinese self-concept, a related facet in the same domain. The intervention had no significant impact (either positive or negative) on the other academic domain (math self-concept) and general school concept. The results demonstrated that the combined approach enhanced participants' academic self-concept better than a single enhancing approach. The research demonstrated the multidimensional nature of academic self-concept. Strong measurement (e.g., SDQ series) was adopted in designing intervention programs that effectively enhanced and addressed low-achieving participants' self-concept. In addition, the combined treatment, internally-focused performance feedback and attributional feedback, worked better to enhance low-achieving students' academic self-concept than merely using one of them. Further applications are discussed in detail.

Keywords: *academic self-concept, internally-focused performance feedback, attributional feedback*

The effects of a breath-training program on reducing the stress-symptoms of chronic heart disease patients

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This study was intended to see whether the Indonesian traditional breath-training program 'Merpati Putih' had therapeutic aspects for patients with Coronary Heart Disease (CHD). The aim was find out whether the training had the effect of reducing stress symptoms of CHD patients in Bandung, Indonesia. This study was a continuation of the empirical findings reported by the members of the organization of the 'Merpati Putih'. Twenty clinically stable CHD patients (determined by a doctor), including ten males and ten females, 40 to 60 years old ($M = 50.1$; $SD = 4.8$), participated in this study. They were diagnosed with CHD with Artery Coronary Stenosis greater than 75% in at least one coronary artery, recommended by cardiologists

for regular medical treatment despite whether or not they had received Percutaneous Coronary Intervention and Coronary Artery Bypass Graft. The study consisted of 13 sessions, twice a week, two hours per session. Interrupted time-series with multiple replications design (Cook & Campbell, 1979) was applied. The stress symptoms were measured by an adapted questionnaire for stress symptoms (Severin, 2002), a sphygmomanometer for blood pressure, and manual measurement using a stop watch for the heart beat. Results showed that the breath-training program reduced stress symptoms (questionnaire $X = 225.878^{**}$, $\alpha = 0.05$; blood pressure $X = 154.224^{**}$, $\alpha = 0.05$; heart beat $X = 28.938$, $\alpha = 0.05$). The Indonesian traditional breath-training program 'Merpati Putih' had therapeutic aspects for patients with CHD. The social supports provided by other participants should be discussed. The results should be further investigated before the training is implemented and recommended for the CHD patients.

Keywords: *breath training, stress symptoms, chronic disease, medical treatment, Indonesian traditional program*

The effects of anxiety on attentional control functions and its implications for driving performance

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Attentional failure has been demonstrated to be a leading cause of traffic crashes. Recent crash statistics from the South Australia police department revealed inattention to be a major contributing factor in as many as 60% of fatal crashes in the year 2008 (South Australia Police, 2008). Further, experimental and naturalistic observation studies have also identified attentional failure to be a significant predictor in driving errors and lapses (Shahar, 2009; Wilson, Chattington, & Marple-Horvat, 2008). Emerging research has highlighted the important influence psychological factors, such as anxiety, have on attentional control in cognitive and motor performance. The purpose of this investigation was to explore the impact of anxiety on

attentional control functions, and its potential implications for driving performance. Seventy-five Australian drivers completed the Parametric Go/No-Go and n-back tasks, as well as the State-Trait Anxiety Inventory and the Driver Behavior Questionnaire (DBQ). A series of ANOVAs revealed that highly-anxious individuals maintain accuracy at the expense of processing efficiency (i.e. response time) for the inhibition, set-shifting as well as updating function of the Central Executive. While hierarchical Multiple Regression has shown that the deficit in processing efficiency (response times) on the Central Executive functions partially mediated the anxiety – driving lapses relationship reported in previous literature, the current study provided evidence to support the potential of Attentional Control deficits in accounting for the influence of anxiety on driving performance. A new model of Attentional Control that incorporates the role of pre-attentive processes and dual-task coordination was proposed to provide a framework for future research to explore the effects of anxiety on task performance.

Keywords: *traffic accidents, attentional failure, driving, processing efficiency whilst driving, central executive functions*

The effects of cognitive appraisal of being teased on self-esteem and loneliness

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Previous studies (Kowalski, 2000; Storch et al., 2003) have demonstrated that an experience of being teased damages the psychological functioning of the target (e.g., low self-esteem, high social anxiety, and high loneliness). Kowalski et al. (2001) suggested the effects of being teased are changed by how a target evaluates the experience and Lazarus' model of cognitive appraisal toward stressors (Lazarus, 1966) is useful to assess evaluation of being teased. Cognitive appraisal includes primary appraisal and secondary appraisal. The purpose of this study is to examine the effects of cognitive appraisal of being teased on self-esteem and loneliness. One hundred and eighty two college students (76 male and 106 female) participated in this study. First, they completed a

questionnaire about their cognitive appraisal of being teased (5 point scale), such as evaluation of threat (e.g., "Being teased is very painful", 4 items), importance (e.g., "it is important for me to react well to teasing", 3 items), and effectiveness (e.g., "I'm good at reacting to teasing", 3 items). They also completed a self-esteem scale (Rosenberg, 1965), and the UCLA loneliness scale (Russell et al., 1980). Cluster Analysis revealed participants were classified into three clusters based on cognitive appraisal of being teased. The first cluster ($n=80$) is called the "indifference cluster" and is characterised as low threat, low importance, and low effectiveness. The second cluster ($n=49$), called the "threatened cluster" is characterised as high threat, moderate importance, and low effectiveness. The third cluster ($n=53$) is called the "adaptive cluster" and is characterised as low threat, moderate importance, and high effectiveness. Concerning frequency of being teased, the indifference cluster scored significantly lower than the other two clusters. One-factor analysis of variance indicated participant in the threatened cluster ($M=2.15$) scored significantly higher on loneliness than participants from the adaptive cluster ($M=1.88$). Additionally, participants from the adaptive cluster ($M=3.52$) scored significantly higher on self-esteem than participants from the threatened cluster ($M=3.12$). The results of this study supported Kowalski's idea that cognitive appraisal (Lazarus) is useful to examine the effects of being teased. The result that one third of participants viewed teasing as cruel is important because the effects of being teased are little known in Japan.

Keywords: *teasing, cognitive appraisal, self-esteem, loneliness, Lazarus*

The effects of emotional empathy on the sensitivity to facial feedback

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Emotional empathy (EE) is defined as an observer's emotional response to another person's emotional state and provides vicarious generation of emotional feelings in the receiver similar to those of the sender. Facial feedback (FF) and EE have an intimate relationship.

Subjects not only mimic the different facial expressions, but also report experiencing corresponding emotions. In addition, people who self-rated themselves as high in EE, tended to react more distinctly with facial muscles to different facial expressions of emotion. The purpose of this study is to investigate the effects of EE on the sensitivity to FF. Participants will be screened and divided into high or low EE groups using the EE Tendency Scale (EETS). As a cover story, participants will be informed that the purpose of the study is to examine differences between healthy people and facial-muscle paralysis patients. Participants will be randomly assigned to a positive or negative expression condition, and will wear a corresponding transparent mask of a happy or disgust expression based on Facial Action Coding System action units. People will be asked to fit their faces to the mask while watching video clips. The order of happy and disgust films presented will be counter-balanced within each condition. The participants will then respond to a ten-point scale according to how happy or disgusting they thought the films were. After the last film, the participants will be interviewed to check whether they figured out the true purpose of the experiment, followed by a debriefing of the experiment. The study is currently in progress. We predict that people high, as compared to low, in EE will rate the happy film as more happy and rate the disgust film as less disgusting in the positive condition. We also predict that the people high as compared to low in EE will rate the disgust film as more disgusting and rate the happy film as less happy in the negative condition. This is an empirical study to examine the effects of EE on the sensitivity to FF. The expected findings will suggest that higher EE is essential in experiencing more positive interpersonal relationships.

Keywords: *emotional empathy, facial feedback, facial action coding system, interpersonal relationships, emotional expression*

The effects of participating in community activity on self and collective efficacies: An intervention in classwork of a junior high school in Sapporo

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This study examined the effects of participating in community activity on self and collective efficacies. Many schools in Japan encourage students to participate in community activities as class work. Usually, students' participation is mandatory, but sometimes it is voluntary. Students of a junior high school answered the same questionnaire twice at two separate times. The first time (April, the beginning of the spring term) the base rate for self and collective efficacies was measured. During the term, there were mandatory and voluntary community activities. Students in the first grade had to participate in a community activity for planting flowers as class work in June. Students could then participate in the voluntary activity of cleaning the local park in early July, though few students chose to participate. Students answered the second questionnaire at the end of the spring term (end of July). Data from 411 students in the first sample and 412 in the second sample were obtained. Only 123 responses gave valid data that could be matched between the two sample sets due to anonymity reasons. Participants ($n=20$) and non-participants ($n=103$) of the volunteer activity were compared. A 2 (participation) x 2 (time) ANOVA with efficacies as dependent variables was conducted. Results showed that the main effect of participation was significant, implying that participants had higher self and collective efficacies than non-participants. The interaction effect was also significant: participants got higher efficacies throughout the term, while non-participants decreased in their efficacies. However, examining the effect of mandatory activity on non-participants of the voluntary activities, those who joined the mandatory activity did not decrease their efficacies throughout the term. This result indicated that mandatory activity had an effect to preserve non-participants from losing motivation to join the community activity. The results suggested that voluntary activity encourages those who have high motivation from the beginning. But only voluntary activity winnows out the motivation of the other people. Mandatory activity is also important for preserving people who do not have high motivation at the beginning from losing self and collective efficacies, otherwise they lose more motivation. The combination of voluntary and mandatory

activities would be effective in environmental education programs in school in Japan.

Keywords: *community, self-efficacy, collective-efficacy, Japan, junior high*

The effects of perceived social support on minority stress in lesbians and gay men

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Lesbians and gay men are regularly faced with several stressors related to their minority status. Negative external events, stigma consciousness, internalised homophobia, and self-concealment are widely reported among sexual minorities, and are associated with negative mental health outcomes. Perceptions of stressors and the resources to deal with them are important in the coping process. In the present study it is hypothesised that social support from sexual minority and heterosexual sources will alleviate perceptions of stressors in gay men and lesbians. Self-identified gay and lesbian students at a large Canadian university participated in an internet study of perceived social support and stressors. Support from other sexual minorities as well as support from heterosexuals was examined. Because support from parents may be of particular importance to university and college students, it was assessed separately. Students also reported their experience of four minority stressors: negative external events, stigma consciousness, internalised homophobia, and self-concealment. Source and amount of perceived support were studied in relation to these four minority stressors. The effects of high perceived support from sexual minorities, high perceived support from heterosexuals, low perceived support from sexual minorities, and low perceived support from heterosexuals on the four minority stressors were examined. Theoretical and practical implications of the findings are discussed, including the importance of the perceptions of stressors and resources in the experience of minority stress. Particular attention is given to the role of social support from various sources in interventions to increase well-being among lesbians and gay men. The present study should contribute to theoretical

conceptions of stress, particularly the transactional theory of stress.

Keywords: *lesbians and gay men, social support, stressors*

The effects of the amount of information and the cognitive style on the sport decision making of badminton athletes in decision-making speed and accuracy

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This article examines the effect of amount of information and cognitive style on badminton decision making. Badminton athletes of varying abilities were studied in the decision-making speed and accuracy. This study used a testing system of decision-making ability of badminton players which was designed independently and examined the effect of amount of information and cognitive style on speed and accuracy of intuitive decision-making. The results indicate that: (1) Between different decision-making tasks of varied amount of information, there is a significant difference in the correct response rate; (2) The average reaction time and the correct reaction time of the large amount information decision-making tasks are less than the small one; (3) The correct rate of the large amount information decision-making tasks is higher than the small one; (4) The correct response rate of high sports level athletes is significantly higher than the lower one, but there is no significant difference in reaction time. In conclusion, badminton players develop decision-making speed earlier than the decision-making accuracy and in the large amount of information task, the decision-making speed and accuracy of badminton players were lower than in the small amount of information task.

Keywords: *cognitive style, badminton players, reaction time, decision-making speed, decision-making accuracy*

The effects of video analysis of the nonverbal behaviour of handball coaches on the coach-athlete relationship

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The purpose of this experiment was to study the impact of video feedback on the coaches' nonverbal behaviour, and its relation with their athletes' anxiety and perception of coaches' behaviour and emotions. One experimental group was composed of 45 athletes and four coaches, and one control group by 58 athletes and five coaches. The measures included one adapted Coaching Behaviour Assessment System (CBAS), one adapted Coaching Behaviour Questionnaire (CBQ), and the Competitive State Anxiety Inventory-2 (CSAI-2). The participants responded to the questionnaires twice with seven weeks in between responses. The coaches' behaviour in competitions during halftime breaks and timeouts was video recorded. Each coach received a frequency table with the answers of his team in the first series of responses, compared with his own answers. The coaches also saw a video of their behaviour during their interventions in competition. Repeated measures ANOVA's showed that athletes of the experimental group became significantly less anxious and that they perceived their coaches significantly more positively than athletes of the control group. The self-perception of coaches of the experimental group improved significantly more, compared to the self-perception of coaches of the control group. One-way ANOVA's showed that goalkeepers in both conditions were significantly more anxious in the pre-test. In both conditions, goalkeepers perceived their coaches less positively than the field athletes in both pre- and post-test. It is concluded that an intervention using video feedback might have positive effects on the anxiety level and coach perception among athletes, and on the self-perception of coaches. It is also concluded that goalkeepers perceived their coach less positively and were more anxious compared to field athletes. Further research is needed to corroborate these findings.

Keywords: *non-verbal behaviours, anxiety, sports coach, athletes, video analysis*

The evidence of the procedure meanings of Chinese connectives Dan and Buguo

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The present study aims to find out evidence about constraints on Chinese adversative connective Dan and Buguo imposes on utterance interpretation by using event-related brain potentials (ERPs) technology. We perform two ERPs experiments in the Language Acquisition Lab of Capital Normal University in China. The 20 participants are university students and the stimuli, which are testing sentences, are presented randomly through the software called STIM 2. ERP data or the electro-encephalogram of the two experiments and are processed by the software called Scan 4. The results indicate that the response accuracy rates of the sentences with Dan / Buguo are apparently higher than those without Dan / Buguo under different conditions, and that the response times of sentences with Dan / Buguo are faster. The behavioral data and ERPs data support each other to explain the cognitive role of Dan / Buguo in language understanding, which helps the participants get to the appropriate interpretation of the utterance more quickly. Based on the theories of brain and neural science and cognitive pragmatics, we discuss the two kinds of data, the behavioral data and ERPs data in order to clarify and explain more scientifically the role of Dan / Buguo in language interpretation. We believe that Dan / Buguo encodes procedural meaning and the proposition introduced by them has the contextual effect of contradiction and elimination. We point out that Chinese connective Dan / Buguo plays a positive role in language interpretation.

Keywords: utterance interpretation, language interpretation, event-related brain potentials

The experience of cross-racial adoption: Transformations in parents' racial identity

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Recent research has shown that Euro-American adoptive parents have experienced social prejudice and discrimination when their adoptive children are from another race (e.g. Friedlander, Larney, Skau, Hotaling, Cutting, & Schwam, 2000). Due to these parents not being from ethnic minorities, they typically have not experienced these issues prior to adoption. The purpose of this research is to investigate how Euro-American parents re-explore their racial identity after facing social prejudice and challenges in developing their child's racial and ethnic identity. Themes from the current study were compared with existing conceptualizations of Euro-American racial identity development (e.g. Hardiman, 1982; Helm & Cook, 1999; Ponterotto, 1988). Between 2004 and 2008, Americans adopted over 31,000 children from China, which currently is the highest number of adoptions to the United States from one country (United States Department, 2009). Over 90 percent of the adoptive parents were European Americans and most of them had goals for their children's racial and cultural socialization (Rojewski, 2005). Therefore, this study focused on Euro-American parents' experiences in raising children from China. Fourteen Euro-American parents were recruited through a Chinese language and cultural school for children adopted from China. At the time of the interviews, the children were between the ages of 6 and 11. The parents were well educated, economically stable, and lived in predominantly white, middle class, suburban communities. A phenomenological design was used to purposefully select a small sample of information-rich cases (Patton, 2002). Each parent completed a one to two hour intensive interview. Questions focused on the parent's efforts at cultural socialization and how the parent's own racial identity had been affected by adopting a child from China. Audiotapes were transcribed and then coded separately by three research team members to identify key passages. Our research team met several times to discuss and come to consensus on these passages. Next, team members individually identified essential features of the data at the next level of analysis. The team met over several sessions to discuss this step and come to a consensus. Key themes from the interview reflected a progression through the adoption process and how it ultimately affected personal

identity growth in the parents. Central topics included adoption memories, cultural socialization practices, challenges to the child's cultural socialization, and personal racial identity growth of the parents. In particular, the parents indicated that they had been changed by adopting a child from China by being more sensitive to inequalities in American culture and by adhering more strongly to a universal, humanistic view of the world. This study provided essential features from in-depth interviews with Euro-American parents to show how their own racial/ethnic identity was transformed by the experience of including a child of Asian background in the family. The results confirmed many aspects of previous white racial development models, but also suggested that most participants have developed a strong interest in embracing multiculturalism and have cultivated a differentiated worldview about another country, China.

Keywords: social prejudice, racial discrimination, inter-racial adoption, ethnic identity, multiculturalism

The grounding principles for the modern pedagogy: Ontopsychological approach

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The goal of this paper is to present the novelty of the achievements of the ontopsihological school in the area of pedagogy and educational psychology. The aim is to describe the methodology, goal and guiding principles of ontopsihological pedagogy, providing examination of the cases. A child is a project of nature, which is actuated in the individualized (distinct) place within defined historic processes. If the ambient environment wants him to be a great man, a great scientist, a good citizen, then it must provide him with instructions, that is must create the conditions for the child. The child, with his needs, absorbs the prevailing rules of the surrounding ambient environment in order for him to become and to formalize himself. However society gives only the general principles of how thinking must proceed and what is good and what is evil. It lays the groundwork for the future conscience

development. However the question is whether the structures of this conscience in conformity are synchronous with the plan of nature, plan of life? Are they going along with the in-itself of Being? Are they consistent with the original life implanted in that particular child, that is the ontic In-itself? The ontopsihological method has discovered an objective criterion of the functionality of a human being and therefore proposes a new vision in the area of pedagogy. How can psychology be more efficient for the pedagogy of the future society – society of the new economy and information society? As our educational model seems to be too far removed from the every-day reality of our children and that is changing too rapidly. Through individualization and isolation of the impulses of the basic life project of any individual it is possible to discover how the project of nature of a life-child wants to actualize itself in existence, and using the instruments of ontopsihological school it is possible to offer to an individual victorious strategies that will be useful and functional at the individual as well as social levels. Today, thanks to the internet, every young person can share his views with the rest of the world. The great majority of young people in the world do not read the information disseminated by official institutions, by university, and by the in general. They read only about themselves, their problems and their anger. Nevertheless every young person claims the right, the fact, and the evidence that “I exist”. This is where psychology can be more active and more efficient and the way it might be will be demonstrated in terms of this paper.

Keywords: ontopsihology, life project, young people

The impact of conflict in teams affective outputs

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The main aim of this study was to develop and empirically test a predictive model of the role of conflict in the effectiveness of work teams. Effectiveness was measured through affective criteria, namely satisfaction and commitment to the team. Two studies were carried out. The first sought to construct and validate the Intragroup

Conflict Scale. The second study investigated, in a first phase, the relationship between the interdependence of tasks, results, and conflicts. In a second phase, Study 2 analyzed the relationship between conflicts, satisfaction, and commitment. For the first study, the data were collected from a sample of 200 students and workers. The analysis of the data was done by factor analysis. For the second study, data were collected from 125 police officers belonging to 25 teams of the Federal Police of Brasilia. The analysis of the data was done by linear multiple regression. The results showed the theoretical adequation of Intragroup Conflict Scale and its statistic reliability, with a two-factor empirical structure (task conflict $\alpha = 0.85$; relationship conflict $\alpha = 0.91$), both accounting for 52.19% of the variance. Regarding the relationship between the variables of the model proposed in study 2, it was found that the interdependence of tasks and results contributed to explain both task conflict ($R^2 = 0.07$) and relationship conflict ($R^2 = 0.05$). In addition, it was found that task conflict was negatively related to satisfaction ($B = -0.61$) and commitment ($B = -0.46$), while relationship conflict had no significant impact on effectiveness indicators. The results showed the reliability of the Intragroup Conflict Scale, and therefore it can be considered a good tool for diagnosis of conflict in teams. The predictive model was observed, the level of task and results interdependence predicted the conflict level in work teams and also it was verified that conflict has a relevant participation in explaining the affective links between members and their team. Therefore, the diagnosis of conflict level provides relevant information for managers in organizations.

Keywords: intra-group conflict, work teams, team effectiveness, organisational management, intragroup conflict scale

The impact of intangibility on perceived risk of online games

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Increasing evidence proves persons nowadays will likely spend their leisure time with online games. This study investigates the intangibility influence on perceived risks (including social risk, time risk, financial risk, physical risk, performance risk and psychology risk) among online gamers. The self-completed market survey questionnaire employs two measures: the Intangibility Scale and the Perceived Risk Scale. Data were gathered in the biggest-sized metropolitan area, Taipei, in north Taiwan, and interviews all took place either at Cyber Café People (with a total of 1018 participants) or via online questionnaire (totaling 400) with voluntary participants. Structural Equation Modelling analysis was used. Cronbach α was adapted to measure reliability and had acceptable reliability. The estimates of Composite Reliability and Average Variance Extracted demonstrated that the measurement model had acceptable internal consistency. Convergent validity is indicated when the path coefficients (loadings) between each latent-trait factor and its manifest indicators are statistically significant. All factor loadings in the Correlational Factor Analysis were significant, and moreover exceeded .5, supporting the convergent validity of the scale items. Regarding the fit statistics for the full model, the hypothesized model was estimated and all the other statistics were within the acceptable ranges, which indicate a good model fit. Results reveal significant positive relationships between Intangibility and all dimensions (social risk, time risk, financial risk, physical risk, performance risk and psychology risk of Perceived Risk among participators in online games). This work suggests possible result explanations and discusses finding implications.

Keywords: online game usage, intangibility influence, perceived risks, psychology risk, social risk

The impact of LMX on staff nurses' organisation-based self-esteem: A mediating effect of perceived organisational support

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Due to the high turnover rate, it is important to understand the working conditions among staff nurses in the nursing profession. This longitudinal study aimed to examine factors related to nurses' organisation-based self-esteem, especially focusing on the mediating effect of perceived supervisor support and the cross-level effect of the head nurses' political skill. Around 1160 staff nurses from three hospitals participated in the study. Both the staff nurses and head nurses were asked to fill out the questionnaires. Each participant was assigned a unique code to ensure that data collected at the three stages could be matched. The number of valid responses for each stage were 813, 945, and 893 respectively. Among them, about 396 staff nurses completed the questionnaires at each stage. The valid data was analysed and the results of hierarchical regression analysis indicated that there was a full moderating effect of perceived supervisor support on the relationship between leader-member exchange and organisation-based self-esteem. Furthermore, the findings of hierarchical linear modeling revealed a significant main effect of head nurses' political skill on staff nurses' perceived supervisor support. According to these results, we concluded that both leader-member exchange and head nurses' political skill contribute to staff nurses' perceived supervisor support. In addition, the high quality of the leader-member relationship sends the message about the support from the supervisor that promotes the members' self-worth and enhances their organisation-based self-esteem.

Keywords: leader-member exchange, LMX, nurses, organisation-based self-esteem, organisational support

The impact of meaningful work on disadvantaged youth

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The aim of this research was to describe how a program of providing meaningful work at the

University of Memphis has affected attitudes toward work and career thoughts. In the summer of 2009, as part of the Economic Stimulus Package in the United States of America (USA), 166 young workers were employed with federal funds at the University of Memphis. They were provided with meaningful work experiences, technology training, seminars on how to apply for jobs, and individual and group counseling around work behaviors. A number of career related instruments, such as the Career Thoughts Inventory, FACES and the Semantic Differential were administered pre and post the 10 week work period at the University. Significant results were obtained in the area of improved attitudes towards work and self as worker. Young, disadvantaged youth can benefit from a meaningful, even if brief, work experience. These youth not only made a salary, but through some significant work related interventions, improved their attitudes towards work and themselves as workers. The results of this model program will be replicated in the summer of 2010 and, hopefully, will be disseminated as a model program for improving career thoughts.

Keywords: career thoughts inventory, meaningful work for youth, youth attitudes towards work, youth work interventions, work behaviors

The impact of organisational climate on field placement experiences of university students

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Although accumulated research findings highlight the importance of organisational climate for employee wellbeing and job satisfaction, the majority of these studies have looked at populations of full-time and/or experienced employees. The present study builds on prior research by evaluating the relative importance of key climate variables on postgraduate university students' experience of field placement, a population characterised by relative inexperience and who tend to exhibit an inordinate amount of stress in relation to work. Eighty post-graduate psychology students from Australian universities completed an online questionnaire measuring organisational climate

variables (support, workload, role clarity, recognition and level of autonomy) and placement-related outcomes (job satisfaction and job stress). Dominance analysis (Azen & Budescu, 2003) was used to determine which of the climate measures was the most important (or dominant) predictor of two key outcome variables (placement satisfaction and placement-related stress). While standard multiple regression analyses revealed that the organisational climate variables accounted for 43% variance in job satisfaction and 26% variance in job stress, dominance analyses further revealed that recognition was the most dominant predictor of job satisfaction whereas workload was the most dominant predictor of placement-related work stress. Interestingly, level of autonomy was poorly related to self-reported satisfaction and stress, suggesting that it may not be an important climate variable in inexperienced work populations. Present findings of most relevant predictors of key employee outcomes are discussed in comparison with results for populations of full-time and experienced employees, and also in light of current practices with regards to organisational set-up for field placement of university students.

Keywords: postgraduate students, field placement, job satisfaction, job stress, organisational climate

The impact of protestant spirituality on the well-being of people in Hong Kong

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There is compelling evidence that religion is a potent force in society, shaping both individuals and the larger society. The most recent WHO Melbourne charter also regards spirituality as one important protective factor for mental health and well-being. Although literature demonstrates that the relationship between religion and well-being is generally positive, information about the mechanism of the religious influence on well-being is still far from clear. The primary objective of the present study is to examine how Protestant spirituality affects the well-being of people in the context of Hong Kong. 324 Chinese from four Protestant communities, representing four major kinds of Protestant spirituality, and one social center in

Hong Kong were recruited to participate in a survey examining the association between various dimensions of religiosity and well-being variables. Path model analysis demonstrated the complex relationship between various spirituality dimensions (religious belief, practice and experience) and well-being variables, manifested in life satisfaction, mental health, social trust and sense of community. While some spirituality-related variables may directly predict sense of community and mental health, the relationship between spirituality-related variables and life satisfaction and social trust are mainly mediated through sense of community and mental health. Furthermore, well-being at the community level (feeling sense of community and social trust) affects well-being on the personal level (life satisfaction and mental health). These findings not only show that the influence of religion on people's well-being can be richly diverse, but also match quite well with the emerging literature on the salutary effect of social capital on health and well-being. Thus, when studying the effect of religion, the multi-dimensions of religion and the religious context cannot be overlooked when drawing any conclusion regarding the cost and benefit of religion.

Keywords: spirituality, religiosity, well-being, sense of community, mental health

The impact of Theory of Mind intervention on school children's peer experience

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The relationship between children's peer interaction and Theory of Mind (TOM) in childhood was examined in the current research with the guidance of the lifespan perspective. Whether a TOM intervention was effective was examined as well as whether the intervention could predict change in peer experience. Sociometric nomination, sociometric rating and questionnaire methods were applied in this study. Forty children in an elementary school from Grade three to Grade six completed the Friendship Quality Questionnaire, and Peer Nomination, Class Play, Situational Story, and

self-made Theory of Mind tasks. Longitudinal tracking and intervention research design were employed in the present study. The data were mostly analysed using t-tests and ANOVAs. The results of the study found that 1. The training of 20 children from Grade three to Grade six was effective in promoting Theory of Mind, 2. There was a significant positive correlation between the pretest and posttest on Peer Interaction and TOM, 3. The differences between friendship quality scores between the pretest and the posttest vary significantly in the experimental and the control group. The difference between the scores in the experimental group is significantly greater than that of the control group and the difference between the pretest and the posttest of fifth and sixth grade groups is significantly higher than that of third and fourth grade groups. 4. The difference between the pretest and the posttest of TOM can significantly predict the difference between the two tests of Friendship Quality. This study illustrated that the intervention of TOM is effective with the level of the TOM increasing after receiving the training. The difference between the pretest and the posttest of TOM can significantly predict the difference between the two tests of Friendship Quality.

Keywords: *theory of mind, school children, peer experience, friendship, peer interaction*

The impacts of objective and subjective caregiving stressors on caregiver mental health: A six-month prospective study of caregivers of older Chinese people with dementia

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Guided by Pearlin's (1999) stress process model, this six-month prospective study investigated the impacts of objective and subjective caregiving stressors (patient problem behaviors and caregiver burden) on caregiver mental health in a sample of caregivers of older Chinese with dementia residing in Hong Kong. A consecutive sample of 122 family caregivers of dementia patients was recruited from local non-government organizations. Caregivers provided information on their demographic characteristics, patient behavior problems as measured by the Cohen Mansfield Agitation

Inventory, and caregiver burden as measured by the Zarit Burden Interview. At six months following the initial contact, 108 caregivers were successfully contacted and responded to the Short Form General Health Questionnaire (GHQ-12). Family caregivers reported poor mental health, 81.5% of the respondents reported a GHQ-12 score above the cut-off point (greater than two). A series of regression analyses was conducted to determine the relationship between patient problem behavior, caregiver burden, and caregiver mental health. In the first two regression models, patient problem behavior was associated with caregiver mental health ($B = .26, p < .05$) and caregiver burden ($B = .42, p < .01$) respectively. In the final regression model, a full mediation was observed where the addition of caregiver burden to the regression for caregiver mental health reduced the relation of patient behavior problem to caregiver mental health ($B = .03$). This study found evidence that subjective appraisal of stress mediated the relationship between stressor and mental health. Specifically, the relationship between patient behavior problems and caregiver mental health was mediated by caregiver burden. For intervention programs for dementia patients and their caregivers to be effective, service providers should provide assistance that can reduce objective stress as well as assistance to help caregivers modify their subjective perception of the stressful situation.

Keywords: *stress process model, caregiver burden, patient problem behaviors, general health questionnaire, dementia*

The importance of exploring the relationship between cultural values and job stress among Sri Lankan migrants in Australia

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This paper discusses the importance of understanding the relationship between cultural values and job stress among Sri Lankan migrant employees in Australia. It is important to study this group as the number of migrants entering Australia and consequently entering the Australian workforce, is increasing every year (Australian Bureau of Statistics, 2007). Despite

this there remains a dearth of research regarding migrant groups, and specifically regarding the relationships between cultural values and job stress. As a result little is known about the general wellbeing of Sri Lankan migrants in the workplace. The current paper will present the rationale for the examination of factors influencing the wellbeing of Sri Lankan migrants in the workplace and present the aims of the proposed research. Further, the appropriate methodology to study migrants in the workplace will be presented. The implications of such a project include the better understanding of employment factors related to Sri Lankan migrants and policy suggestions for employers with a culturally diverse workforce.

Keywords: cultural values, job stress, migrants, workplace

The importance of gender identity disorders in Iran (Case study: Shahid Navab Safavi Center, Tehran)

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Sexual disorder therapy involves a psychic-based recognition but the cure of sexual dissatisfaction doesn't include the change of Sexual Identity; however, identity is considered too important to adopt a recognized disorder to his/her distressed identity. According to the cultural and social situations of Iran, and in spite of removal of legal preventives, executive remedies, recognition, guidance and support for Gender Identity Disorder (GID) is still unknown amongst the public. The purpose of this research is to present a psychic profile of GID, their individual satisfactions in life, their social compatibility and finally some remedies which are proposed by experienced people in related departments and organizations (such as Behzisty Department, Naja, Country Ministry etc). In the first step we monitored 200 suffered people in Shahid Navab Safavi center via a directional open-response interview approach. We gathered valuable information about participants' disorder reputation, their family, mental, social, economic and medical troubles and also their personal opinion on social and cultural adaptation. A parallel interview was conducted

between experienced people in related departments and organizations to help us to present a set of remedies to make sense. As a result, all the information is categorized in seven specified groups: individual, family, social, economic, therapeutic, facilities and medical services, life improvement and their compatibility. Studies have shown that when the problem is recognized the first problem for those who suffered GID is individual and family troubles. Economic troubles and lack of facilities and services come after. The only organization that is responsible to support them is Behzisti with the cooperation of Legal Medical Department who check them and make some counseling sessions, then present them for operation. Studies have indicated that medical services do not have the good qualities which are needed and the injured people often have problems in immediate adaptation.

Keywords: gender identity disorder, sexual disorder therapy, sexual identity, social compatibility, social and cultural adaptation

The influence factors and mechanism of societal risk perception

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The degree of risk that individuals assign to societal problems involving possible harm helps shape their attitudes toward public policy on such issues. So it is of great value in theory and practice to investigate societal risk perception of people especially in a Socio-economic transition period. A total of 2,485 people participated in the survey (43% males and 57% females). Their ages ranged from 18 to 83 (median = 36.3) and they were all come from Beijing. In general, the sample is in line with the region's population characteristics. The major findings are listed: Firstly, a scale of societal risk perception was designed and two factors were identified (Dread Risk and Unknown Risk). Secondly, structural equation model was used to analyze the influence factors and mechanism of societal risk perception. Risk preference, government support and social justice could influence societal risk perception directly. Government support fully moderated

the relationship between government trust and societal risk perception. Societal risk perception influenced life satisfaction, public policy preferences and social development belief. From the result, we can conclude that: 1) Daily life hazards, instead of macroscopically problems, capture the preoccupation of current China; and 2) By describing the societal risk and examining the structured model, we can account for the influence factors and mechanism of societal risk. Recognition of both direct and indirect effects through the modeling of exogenous and endogenous relationships improves the ability to capture the myriad determinants of the citizenry's perspective on hazard management.

Keywords: hazard management, risk perception, government trust, social justice, socio-economic transition

The influence of emotional state on coping with exam stress

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The aim of this research was to describe the connection between emotions and strategies applied in an exam situation. The study was a randomized controlled trial using a convenience sample of 90 fully informed and consenting young people just before an important exam. The instruments comprised of the Emotional State Inventory and Ways of Coping Questionnaire, both of which are based on Lazarus' (1984) theory. The results show that there is a connection between emotions and strategies applied in an exam situation. There is positive correlation between the emotion group called Challenge Emotions (excitement, satisfaction, willingness) and the following confrontation strategies: fighting ($r = .54, p < .01$), problem solving ($r = .59, p < .01$) and acting according to the schedule ($r = .43, p < .01$). There is also a positive correlation between the emotion group called Benefit Emotions (gladness, joy, optimism, relief) and the following confrontation strategies: fighting ($r = .34, p < .01$), problem solving ($r = .37, p < .01$) and acting according to the schedule ($r = .33, p < .01$). There is a negative correlation between the emotion group called Challenge Emotions

and the following escape strategies: wishful thinking ($r = .32, p < .01$), and keeping distance ($r = -.22, p < .05$). There is a negative correlation between the emotion group called Benefit Emotions and one escape strategy which is wishful thinking ($r = -.41, p < .01$). There is a positive correlation between the emotion group called Threat Emotions (anxiety, uncertainty, hopelessness) and the following escape strategies: wishful thinking ($r = .59, p < .01$) and keeping distance ($r = .31, p < .01$). There is a positive correlation between the emotion group called Harm/loss Emotions (anger, disappointment, sadness) and the following escape strategies: wishful thinking ($r = .51, p < .01$) and keeping distance ($r = .30, p < .01$). There is a negative correlation between the emotion group called Threat Emotions and the following confrontation strategies: fighting ($r = -.33, p < .01$), problem solving ($r = -.32, p < .01$) and acting according to the schedule ($r = -.33, p < .01$). There is negative correlation between the emotion group called Harm/loss Emotions and the following confrontation strategies: fighting ($r = -.23, p < .05$) and acting according to the schedule ($r = -.41, p < .01$). On the basis of the presented study it is possible to claim that emotions of challenge, emotions of benefit, emotions of threat and emotions of harm/loss are connected with applying different strategies of coping with exam stress. Emotions of challenge and emotions of benefit help applying confrontation strategies, while emotions of threat and emotions of harm/loss are connected with using escape strategies. The conclusions from the study may be helpful for people who experience the situation of exam stress.

Keywords: emotions, coping strategies, exam stress, escape strategies, confrontation strategies

The influence of affective reactivity, sensation seeking and risk perceptions of risky driving behaviours

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Reinforcement Sensitivity Theory (RST) proposed that the Behavioural Inhibition System (BIS) and Behavioural Approach System (BAS) are instrumental in understanding an individual's

tendency to engage in risky behaviours. Previous studies have reported individual differences in BIS and BAS to be associated with challenging health behaviours such as substance use and gambling. Specifically, findings from previous research suggest that BAS sensitivity appeared to contribute to engagement in risky behaviours through the heightened tendency to seek out novel and potentially rewarding experiences. The current study aims to apply the predictions of RST to a range of risky driving-related behaviours, such as speeding, drink driving and drink riding. An additional focus of the present study is the effects of sensation seeking on the perception of risk for these risky behaviours. Approximately 300 participants from the State of Queensland, Australia, will be surveyed using an online questionnaire designed to assess participants' levels of BIS, BAS sensitivity, sensation seeking, and risk perceptions of a range of risky driving related behaviours, such as drink driving and not using a seatbelt. Data generated from the sample will be analysed using regression techniques to assess the relationship between BIS/BAS sensitivity, sensation seeking, and risk perceptions of risky driving behaviours. Findings from the current study will contribute to the literature of Reinforcement Sensitivity Theory and report the application of the theory to the traffic psychology domain. Our findings will also contribute to the existing body of literature identifying personality traits that might make individuals more likely to engage in risky behaviours.

Keywords: *risky driving behaviours, reinforcement sensitivity theory, behavioural inhibition system, behavioural approach system, risk perception*

The influence of generation on the relationship between organisational climate and intention to leave

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Recent literature has suggested that generational differences may account for some variance in findings between Organisational Climate (OC) and Intention to Leave (ITL). It was

proposed that generation may play a mediating role in the relationship between OC and ITL. The current study examined the association between OC and ITL and explored whether generation is a mediator of this relationship. Participants consisted of 202 Allied Health Professionals from metropolitan and rural health agencies. The majority were female and came from a variety of age groups. Participants completed the Work Environment Scale (WES; Moos, 1994), two items as a measure of ITL as well as demographic information including gender, age group and generation. Multiple linear regression analyses revealed that OC factors as a whole contributed 36.1% of variance in ITL. Three factors, namely Supervisor Support, Job Involvement and Physical Environment were each found to contribute unique variance in ITL. Subsequent mediation analysis found that generation did not mediate the relationship between OC factors and ITL. The results provide evidence for OC as a significant contributor to employees' ITL. Specifically, it was found that Supervisor Support, Job Involvement and Physical Environment contributed unique variance in ITL. These results imply that organisations should focus retention strategies around OC factors rather than customising strategies according to generational differences.

Keywords: *organisational climate, intention to leave, supervisor support, job involvement, physical work environment*

The influence of meditation on well-being: The mediating effect of psychological acceptance

CHU, L. C. (Chung Shan Medical University)

Past empirical evidence has demonstrated that meditation is not only beneficial to mental health (Carmody & Baer, 2008) and the regulation of cognitive and emotional functioning (Segal, Williams, & Teasdale, 2002), but is also effective in eliminating perceived stress and related symptoms (Carmody & Baer, 2008). Very few studies have attempted to understand mediating processes underlying the relationship between meditation and well-being. These benefits of meditation may be attributed to its acceptance nature. Psychological acceptance is people's willingness to experience

thoughts, feelings, and physiological sensations, especially those that they evaluate negatively, such as fear, without having to avoid them or let them determine their actions. These characteristics can enable people to disengage effectively from automatic thoughts, habits, and unhealthy behavioral patterns, thus fostering informed and self-endorsed behavioral regulation, something which has long been associated with the enhancement of well-being. Past research has found that people with higher psychological acceptance tend to have better mental health (Bond & Bunce, 2003; Donaldson-Feilder & Bond, 2004). This study therefore expects that the longer people engage in meditation, the higher the level of their psychological acceptance should become. Psychological acceptance therefore appears to be an effective mediating variable in terms of the relationship between meditation and well-being. This study extends previous research by proposing and testing a model that examines the mediating effect of psychological acceptance on the relationship between meditation and the well-being. We used a cross-sectional survey research design and convenience sampling to collect data. The study's participants were full-time working adults employed by public and private enterprises in Taiwan. We distributed 350 questionnaires, directing 175 mostly towards students of the Zen Buddhist Association who had jobs. All participants were asked to evaluate their meditation experience, psychological acceptance and well-being. The sample returned 271 responses, 135 from males and 136 from females, with a mean age of 35.58 years, an effective questionnaire rate of 77%. These participants employed in industry sectors such as hi-tech, finance and insurance, business and professional services, traditional manufacturing, medical and government. From the regression analysis, it was discovered that psychological acceptance was positively associated with well-being as job satisfaction, mental health, and physical health ($\beta = .27, p < .01$; $\beta = .64, p < .01$; $\beta = .55, p < .01$). In addition, meditation experience was positively associated with psychological acceptance ($\beta = .36, p < .01$). Furthermore, this study confirmed that meditation experience was positively associated with well-being as job satisfaction, mental health, and physical health ($\beta = .24, p < .01$; $\beta = .46, p < .01$; $\beta = .47, p < .01$). Finally, this study

showed that under meditation experience the predictor of well-being as job satisfaction, mental health, and physical health were partially achieved through the mediating effect of the psychological acceptance. The findings confirm that meditation not only generates a direct effect for balancing its practitioners' well-being, but also has an indirect effect in terms of enhancing their well-being by storing up high psychological acceptance. The therapeutic efficacy of psychological acceptance has received increasing attention from every type of proposal for stress-management training. However, it is important to ask whether intervening to foster more psychological acceptance can help improve well-being in the future. Future studies should compare and evaluate the relative effectiveness of a variety of such stress interventions on psychological acceptance.

Keywords: *meditation, perceived stress, well-being, psychological acceptance, job satisfaction*

The influence of orthodontic treatment on self esteem and perceived attractiveness

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With the increasing popularity of orthodontic treatment for occlusal anomalies with aesthetic improvement but minimal benefits for oral function, dentists argue that such treatment is important for social and psychological wellbeing. Since elective orthodontic treatment may be recommended as a preventive measure for social or psychological problems, the aim of this study is to review current literature pertaining to the assertion that orthodontic treatment is of value in improving self-esteem and perceived attractiveness. Searches in Medline database (1950 to 2009), EBM reviews, and PsycINFO were performed using "malocclusion", "orthodontics", "self-concept", and "body image" as sub-headings, with "psychosocial", "self-esteem", and "perceived attractiveness" as keywords. Included were studies investigating the association between orthodontic treatment and change in psychosocial measures, such as self-esteem, self-concept, body image, facial

appearance, perceived attractiveness and aesthetics. Articles with orthognathic surgery as the treatment modality were excluded. The search yielded 219 articles, of which 24 met the inclusion criteria. Many studies support the association between orthodontic treatment and improved dentofacial aesthetics; however, limited evidence exists for the influence of orthodontic treatment on self-perceived attractiveness. There is conflicting evidence concerning the influence of orthodontic treatment on self-esteem. This might be explained by the lack of rigorous definition of constructs, unreliable measurement strategies, lack of control of confounding variables, poor patient randomisation and a dearth of longitudinal studies. Rigorous research to explore the influence of orthodontic treatment on self-esteem and perceived attractiveness is required, employing a standardised approach, reliable measures, appropriate control of potential confounding variables and a longitudinal research design with pre- and post-treatment assessment.

Keywords: *occlusal anomalies, orthodontic treatment, self-esteem, perceived attractiveness*

The influence of regulatory focus of supervisors and subordinates on LMX and the performance of the subordinates

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Regulatory focus theory proposes that people have two distinct self-regulatory foci: promotion focus and prevention focus. The major purpose of this study was to examine the effect of regulatory focus of supervisors and subordinates on leader-member exchange (LMX) quality perceived by the subordinates, and the task performance and contextual performance of the subordinates. This study investigated (1) the different effects of promotion focus and prevention focus on task performance and contextual performance, (2) the effect of difference and/or interaction of regulatory focus of supervisors and subordinates on LMX and performance, and (3) the mediating role of LMX between regulatory focus and performance. Participants of this study included 249

employees and their supervisors. Participants were recruited from multiple industry and company types in China. Subordinates rated their own regulatory focus and LMX, and supervisors rated their own regulatory focus and the task performance and contextual performance of their subordinates. Data were matched in pairs for statistical analysis. Some of the key findings included: (1) promotion focus of both the supervisors and the subordinates was positively related to the contextual performance of the subordinates, and prevention focus of both the supervisors and the subordinates was positively related to the task performance of the subordinates; (2) there was an interaction effect of the regulatory focus of the supervisors and the subordinates. When the regulatory focus scores for the supervisors and the subordinate were both higher, the outcome scores were higher; (3) The similarity of regulatory focus of the supervisors and the subordinates moderated the relationship between regulatory focus of the subordinates and certain dimension of LMX; and (4) LMX partially mediated the relationship between regulatory focus and the performance of the subordinates. In conclusion, regulatory focus is an important antecedent of employee performance, and both the level of regulatory focus of the supervisors and the subordinates and the interaction of regulatory focus of the supervisors and the subordinates play critical roles.

Keywords: *regulatory focus, leader-member exchange, promotion focus, prevention focus, task performance*

The influence of resilience on the appraisal of academic stressors as threatening and challenging

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Throughout their education students encounter many difficult situations that must be dealt with effectively in order to avoid negative psychological, physical, and academic consequences. According to the transactional model of stress and coping, when individuals are faced with an actual or anticipated stressor an evaluative thought process is triggered where the potential impact of the situation to their own well-being is appraised. Threat appraisals

involve assessing the potential for harm or loss in the future, while challenge appraisals reflect the anticipation of gain or growth from the situation (Lazarus & Folkman, 1984). One factor that may influence the way in which an individual will appraise stressors and consequently cope with them is trait resilience, which refers to the personal qualities that allow a person to thrive in the face of adversity (Connor & Davidson, 2003). It is hypothesized that higher levels of trait resilience, compared to lower levels of resilience, will be associated with the appraisal of upcoming tests and exams as more challenging and less threatening. Three hundred and four university students completed an online study in the week prior to the end of the academic term. Participants completed a series of personality measures including trait resilience, and were then randomly assigned to either a resilience boosting writing exercise, or a control exercise. Participants then appraised their own upcoming tests and exams as threatening and as challenging. A MANCOVA was performed to examine the association between the personality measures, writing exercise and appraisals. Results reveal the hypothesized association between trait resilience and appraisals, such that resilience was positively related to appraisals of challenge, and negatively associated with appraisals of threat. Further analyses to examine the mechanism through which resilience affects appraisals suggest that affect may play a role. The research findings suggest that resilient individuals are more likely to appraise upcoming stressful events as challenges, rather than as threats, due in part to the association of resilience to affect, such that resilient individuals appear to have more positive affect and less negative affect than non-resilient individuals. Theoretical and practical implications of the association between resilience and appraisal are discussed.

Keywords: *trait resilience, appraisals, stress coping*

The influence of the parent-adolescent relationship on adolescents' emotional well-being

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The general aim of the study was to investigate adolescent emotional well-being and the parent-adolescent relationship as a precursor to adolescent emotional well-being. The research was conducted at two secondary schools located in the Gauteng province in South Africa. A quantitative cross-sectional survey research design was followed. Convenience sampling was used. Participants included Grade 9 to 11 learners who fitted the selection criteria. Validated psychological measuring instruments were used to gather information at the schools. The results indicated that the parent-adolescent relationship was a predictor of the emotional well-being of this total group of adolescents and attachment-anger and family satisfaction-cohesion were the best predictors. Significant differences between genders on emotional intelligence and fortitude and between cultures on emotional intelligence, fortitude and positive affect were found. The emotional well-being of adolescents correlates with aspects of the parent-adolescent relationship and the parent-adolescent relationship could serve as a predictor of adolescent emotional well-being.

Keywords: *adolescent emotional well-being, parent-adolescent relationship, attachment anger, family satisfaction, emotional intelligence*

The influence of time pressure and number of attributes on information processing in purchasing decisions

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This research employed the technology of information board, used a commodities purchasing decision as the experimental task, and explored the influence of time pressure (high time pressure, low time pressure and no time pressure) and the numbers of attributes on decision makers' information processing. The study included two experiments. A preparative experiment tested the time of decision making under different time pressures via simulated commodities purchasing tasks programmed with a computer. The formal experiment explored the influence of time pressure and the numbers of attribute on information processing, on the basis of preparative experiment. The results showed that (1) on the depth of information search and

average decision time, time pressure and the number of attributes had a significant main effect and interaction. (2) on the mode of information search, time pressure and number of attributes had a significant main effect, but no significant interaction. And decision makers usually applied a decision strategy according to alternatives under no and low time pressure. However they mostly applied a decision strategy according to attributes under high time pressure.

Keywords: *Purchasing decisions, Time pressure, Decision making, Information processing*

The influence of work behavior on meaningful performance

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This research is a causal study which is conducted to determine the effect of work behavior on meaningful performance. Meaningful performance is the performance generated by the fulfillment of serving a better work environment, which is conducted without the burden and caring, which is run by lasting to realize a better future (Jatnika, 2006). Meaningful performance will not only produce high performance but also the one that will make individuals have meaning in their work. These individuals will eventually be respected, be models for other parties, and be able to improve self-actualization. Therefore work is not only an activity to get some income, but also a part of the individual's definition of himself, so that individual can improve self-actualization. Conceptually meaningful performance is influenced by the work behavior (quality of interpersonal relationship, acceptability of leadership, quality of team-work development and quality of work atmosphere development). The measurement in this research is done using questionnaires given to 327 top managers, middle managers and supervisors on service companies in Indonesia. The data obtained were analyzed using path analysis that will be exposed to the variables that significantly affect the meaningful performance. The results of data analysis show that meaningful performance is influenced by work behavior: quality of interpersonal relationship, acceptability of

leadership, and quality of team-work development. The quality of work atmosphere development does not affect the meaningful performance significantly.

Keywords: *work quality, work behaviors, meaningful performance, work environment, team-work*

The interaction of job demands and job resources in a matrix organisation

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The paper makes use of the Job Demands - Resources model to explore the impact of the introduction of a matrix organizational structure in one large public research-focused organization in Australia. The findings represent the outcome of a qualitative research project exploring the interaction of job demands and job resources in a large scientific research organization. Exploratory semi structured interviews were held with research scientists across six divisions and at different levels of the organization. Staff members were interviewed for approximately one hour. The interviews were digitally recorded, transcribed and analysed using NVIVO software. A total of two focus groups comprised of six staff and 20 individual interviews were undertaken in 2009. The qualitative stage of the research allows for the identification of a range of organization specific job demands and resources. These will be explored further during the second quantitative stage of the project. The newly introduced matrix organizational structure had greatly increased the workloads of supervisors who were responsible for substantially larger numbers of research staff. The electronic system used to record the working time of scientists created considerable job dissatisfaction. The system did not permit scientists to record their actual hours worked. This resulted in an unwillingness to work above standard working time. Many junior scientists experienced reduced career guidance from supervisors who were often unable to comment on the quality of their science. Research scientists also experienced increased role conflict. Senior

management encouraged a focus on commercialization, and staff performance was also increasingly assessed against success in securing external funding. The criteria underpinning promotion decisions, however, continued to be dominated by research publications. Relationships with co-workers and team dynamics were often positive. Nevertheless, the organizations culture was widely viewed as competitive and many female interviewees highlighted difficulties with career advancement and with being accepted in a male-dominated environment. The paper found support for the argument that increasing job demands combined with reduced job resources results in withdrawal behaviours and declining levels of employee motivation and commitment.

Keywords: job demands-resources model, job resources, organization specific job demands, employee motivation, employee commitment

The investigation of forgiveness among original and nuclear families and its relationship with marital satisfaction

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This study investigated forgiveness in original and nuclear families as well as its relationship with marital satisfaction. The research has been conducted on 200 families (couples including 100 wives and 100 husbands) in Tehran, Iran. They were selected according to convenient sampling. It was a descriptive study and the tools used were: demographic questionnaires, family forgiveness scale (FFS) and questionnaire of marital satisfaction (ENRICH). The results of the study showed that there was a significant positive correlation ($r = 0.38$) in forgiveness between two generations and also between forgiveness and marital satisfaction ($r = 0.51$). In addition, there was a significant positive correlation between forgiveness and age, marital duration and education levels of couples. However, there was not a significant relationship between the number of children and forgiveness. According to the findings we can say that forgiveness may be effective in preserving family health.

Keywords: forgiveness, marital satisfaction, nuclear families, couples, family health

The measurement of workplace socialisation: An evaluation of the validity of the Thomas and Anderson Socialisation Questionnaire (TASQ)

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Researchers report positive relationships between newcomers' socialisation on important work outcomes such as job performance, job satisfaction, commitment, turnover, mental health, task mastery and intentions to stay. Consequently, the measurement of workplace socialisation is important. Few studies utilise consistent measures of socialisation and even less studies report upon the factor structure, other validity results and reliability. The aim of this study was to examine the proposed four factor structure (social, role knowledge, interpersonal support, and organisational knowledge) of the Thomas and Anderson Socialisation Questionnaire (TASQ) as originally reported by Thomas and Anderson (1998). Furthermore, generalisability of the factor structure will be tested in a different sample. Correlations between the TASQ and subscales with a similar established instrument may also support the validity of this instrument. This sample comprised of 215 employees from 17 different Australian-based organisations. The TASQ was used as the measure of socialisation and the Work Environment Scale (Moss, 1981) factors of job involvement, supervisor support and co-worker cohesion were measured. The factor analysis revealed four factors: social, role knowledge, interpersonal support, and organisational knowledge which was consistent with Thomas and Anderson's (1998) findings. However, there were variations in the item loadings in the social subscale. The TASQ subscales were compared with the subscales of the Work Environment Scale and results revealed significant correlations between the subscales. Based on inspection of the items, it was suggested that the 'social' subscale can more accurately be relabelled as 'co-worker cohesion'. Cronbach's alphas were; social (0.87), interpersonal support (0.88), role knowledge (0.90), and organisational knowledge (0.87).

With some recommended changes the TASQ was found to be a reliable and valid measure of workplace socialisation that is generalisable to other groups.

Keywords: workplace, socialisation, socialisation questionnaire, Thomas and Anderson, validity

The mediating effects of emotional intelligence and coping strategies on problem behaviours in adolescents

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Early adolescence is a time of transition during which the individual experiences not only profound physical, emotional and cognitive changes, but also changes in terms of societal expectations regarding appropriate behaviour patterns and preparation for taking on adult roles. This transition from childhood to adolescence can be a challenging time for many young people. While many adolescents navigate this period without experiencing major difficulties, some individuals may experience psychological and behavioural problems. As many as 14% of Australian children under the age of 15 have some form of mental or behavioural problem (Australian Bureau of Statistics, 1997), and such problems may have "flow-on" negative consequences into adulthood. In light of this, the establishment of methods to identify individuals who are at risk for developing problem behaviours and strategies for the amelioration of these behaviours is of critical importance. It has been proposed that the recently emerging concept of Emotional Intelligence (EI) may offer a measure that has predictive value for identifying those at greatest risk for problem behaviour. This study explored the mediating effect of Emotional Intelligence (EI) and coping strategies on problem behaviours in Australian adolescents. One hundred and forty-five adolescents (60 males and 85 females with a mean age of 12.02 years) completed self-report instruments of EI, stress coping strategies, and problem behaviours. The relationship between Emotional Management and Control and engagement in internalising behaviours was found to be mediated by the use of non-productive coping

strategies. Mediation models of externalising, anxious/depressed, withdrawn/depressed, and aggressive behaviours illustrated significant overlap with adolescents' abilities to manage and control strong emotions and engage in non-productive coping strategies. The results are discussed in regards to how coping strategies are utilised in adolescence may produce more or less adaptive patterns of coping during adulthood. The development of emotional abilities may be required to improve coping outcomes for adolescents, which in turn may produce better psychological outcomes for adolescents in the long-term.

Keywords: emotional intelligence, problem behaviour, coping strategies, adolescence

The microcredit and its users: A comparative study between Argentina and Spain from a psychological perspective

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MARIA, M. (University of Cordoba)

The aim of the study was to compare some of the main important dimensions of a microcredit between two countries and to analyze and compare the consumer profile of a microcredit. The sample comprised 100 subjects. Interviews, questionnaires and discussion groups were used to collect a range of information across the following dimensions: 1) consumer profile (age, genre, work situation, education level, marital status, job experience, experience in leadership, experience in creating organizations, market research, motivation of solicitude, country, among other dimensions); 2) characteristics of the microcredit (financial sources, interest rates, quantities, beneficiaries, financial institutions, grace period, commission among other dimensions); 3) process of solicitude and concession; and 4) situation of the microcredit (number of operations, quantities, refund rates, default rate, delay in the refund, among other dimensions). A descriptive analysis and meta data was produced using SPSS 16.0. Differences between both countries have been observed in most of the analyzed dimensions, nevertheless not in the sub-dimensions. There seem to be lots

of similarities in the demographic profile of microcredit's clients between both countries (considering age, education, marital status, experience). On balance, in the Spanish context, the microcredit characteristics have more likeness with the traditional credits, with a bigger presence of private financial institutions (banks), while Argentina's microcredits have a major relationship with the original approach of the Grammen Bank and their running is public. In Spain, this kind of financing has a relative short history when compared to Argentina, and nowadays it has been strongly affected by the economic crisis in the country. The solicitude process in Argentina's case has lower levels of bureaucracy and depends entirely on public institutions; however, this is completely different in the Spanish case. Finally higher rates of refund have been observed in the last years in the Argentina's case comparing with Spain.

Keywords: *microcredits*

The mobilization and root causes of mass incidents in China: Case studies

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Mass incidents in China refer to the conflicts between some collective groups and their administrative authorities. There are tens of thousands mass incidents that have occurred every year during past decades. A new characteristic was observed since 2004: While officials intervene in an ordinary civil or security conflict, the conflict soon turns to the authorities. It infers that discontent accumulates in people. This present study tried to explore why and what people feel discontent about and how a mass incident is mobilized. Four cases of mass incidents that occurred in 2008 and 2009 were chosen as the subjects of this study. We interviewed the local cadres and residents, asking the same questions, such as what public policies the local government made in recent years and how they thought the public policies worked. Comparing the responses of the cadres and residents, we tried to determine policy failures and improper administrations. Results indicated that: 1) residents complained that they

were victims of some policies, while cadres considered their policies benefitted most people; 2) nonfeasance of authorities was considered as a most dissatisfactory administrative behavior by residents; 3) relative deprivation of some social groups and collective identification may be a mobilization of mass incidents, and rumors before and during the incidents play a catalyzing and magnifying role; 4) policy failures and improper administrations were the root causes of mass incidents. We also found that the conflict aims of mass incidents were restricted to official properties (vehicles and/or buildings) and collectives hardly injured official staff. They rarely destroyed private materials. Mass incident is a strategy of disadvantaged social groups to put pressure on authorities for declaring or protecting their interests. Policy failures and improper administrations are knowledge-based errors of policy makers and official staff, so officials are hardly self-aware their failures immediately. Social scientific scholars as the third party may be an intermediary between collectives and authorities, and be a detector to help governments find their policy failures and improper administrations.

Keywords: *mass incidents, civil conflict, mass mobilization, disadvantaged social groups, collective behaviour*

The moderating effect of an innovative climate on the relationship between work-related stress and job satisfaction

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An innovative climate has been suggested to be a job resource by which organisations can assist experienced employees alleviate the negative effects of work demands on job satisfaction. However, considering the job environment of inexperienced employees may be quite different to experienced employees, the aim of the current study was to test the relevance and impact of an innovative climate on job satisfaction in inexperienced employees. In an attempt to better understand how an innovative climate impacts job satisfaction, a secondary aim was to explain how an innovative climate leads to job satisfaction using autonomy, support, job

clarity and organisation-based self-esteem (OBSE) as potential mediators. For the study, 80 university students currently enrolled in postgraduate studies in psychology and undertaking placement as part of their university degree were invited to complete an online questionnaire measuring organisational experiences and climate. In contrast to prior studies (which have sampled experienced/full-time employees), current results suggest that high levels of innovation may strengthen the negative relationship between work-related stress and job satisfaction. The results also revealed that the relationship between an innovative climate and job satisfaction is significantly mediated by OBSE and partially mediated by job clarity. It was concluded that low innovative climates as opposed to high innovative climates act as a buffer against the negative impact of work-related stress on job satisfaction for inexperienced employees while a high innovative climate exacerbates this effect. Therefore, the effect of an innovative climate on the relationship between work-stress and job satisfaction established in past research based on experienced employees cannot be generalised to inexperienced employees. The findings of the current study also reinforce the need to provide sufficient structure with clear policies and procedures for inexperienced employees in order to reduce work-related stress and enhance job satisfaction.

Keywords: innovative climate, work stress, job satisfaction, inexperienced employees, organisation based self-esteem

The moderating effect of parent gender on hazardous alcohol use among college students who are the Adult Child Of Alcoholics (ACOAs)

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Approximately 11% of all children in the United States (US) live with at least one parent who abuses or is dependent on alcohol or other substances (US Department of Health and

Human Services, 2008). Among college students, approximately 25% meet the criteria for being an adult child of an alcoholic (ACOA; Grant et al., 2004). History of alcohol abuse in one's family of origin is linked to offspring risk for alcohol abuse (King & Chassin, 2007; Warner, White, & Johnson, 2007; Zhou, King, & Chassin, 2006). Whether maternal or paternal alcoholism is linked to greater risk is not known. We examined whether the effect of ACOA status on hazardous drinking was moderated by which parent was suspected of alcoholism. Surveys were completed by 687 undergraduate students attending a large university in southeastern Virginia. Based on their Children of Alcoholic Screening Test (CAST; Jones, 1983) scores, 24% (162 of 687) were categorized as ACOAs (CAST score ≥ 6); 66% (451 of 687) were categorized as non-ACOAs (CAST score ≤ 1). The remaining 11% (74 of 687) were indeterminate (CAST score two to five); data from indeterminate respondents were not examined in the following analyses. Using the Alcohol Use Disorders Identification Test (AUDIT; Babor, Higgins-Biddle, Saunders, & Monteiro, 2001), 27.3% were classified as hazardous (medium to very high) drinkers. Using hierarchical regression analysis, we entered the main effects of ACOA status and suspecting mother and/or father of having a "drinking problem" in Step One, and entered the interaction between ACOA status and suspecting mother and/or father of having a "drinking problem" in Step Two. In Step One, only ACOA status (dummy-coded, 0 = non-ACOA, 1 = ACOA) significantly predicted hazardous drinking ($\beta = .146$). In Step Two, the effect of ACOA status on hazardous drinking was moderated by suspecting one's mother (but not one's father) of alcohol misuse ($\beta = .155$), which rendered the main effect non-significant. These results indicate that the effect of ACOA status has a stronger association when one's mother is suspected of alcoholism. Future research should examine the potential mediating mechanisms through which maternal and paternal alcoholism may have differential effects on young adult children.

Keywords: paternal and maternal alcoholism, alcohol abuse, hazardous drinking, children of alcoholic screening test

The moderating role of leader-member exchange in the organizational justice to job satisfaction and turnover intention relationship

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This research examines leader-member exchange (LMX) as a moderator of the relationships between organisational justice, job satisfaction and turnover intention. We hypothesised that group managers would influence the organisational justice feeling in their apartment. Five hundred and thirty-eight employees from the front line participated voluntarily. They were asked to finish the questionnaire independently and seriously, and to return the questionnaire the following day. Measurements included LMX, job satisfaction, organisational justice, and turnover intention. The results showed that the positive relationship between organisational justice and job satisfaction was weaker when the mean on LMX was low. In addition, the negative relationship between organisational justice and turnover intention was weaker for those high in LMX. The findings highlight the important role that leaders play in influencing the relationship between organisational justice to job satisfaction and turnover intention through the patterns of inclusion that they create in their units.

Keywords: *leader-member exchange, organisational justice, job satisfaction, turnover intention*

The motivations for and barriers to physical activity among overweight women with type 2 diabetes and depression

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The aim was to use qualitative methods to explore the motivators, barriers, and mood influences on participation in physical activity (PA) of overweight women with type 2 diabetes and depression. Participants were 11 overweight women (median age of 61 years; IQR = 25) with type 2 diabetes and at least mild depressive

symptoms. Following a standard consent process, each woman participated in a semi-structured interview (approximately 30 to 45 minutes in duration) focused on PA motivators, barriers, and mood influences. The interview process continued until theoretical saturation was reached. Inductive Content Analysis was used to analyse data. Nearly half the participants ($n = 5$) reported a sedentary level of PA. For those who reported some PA, the main modes were incidental/lifestyle ($n = 7$), and walking ($n = 3$). Main motivators to PA were socializing with others (9), health benefits (5), enjoyment (4), and doing something different from their daily routine (4). Major barriers to PA included health problems ($n = 9$), low motivation ($n = 9$), depression/low mood ($n = 7$), and weight ($n = 5$). All participants reported well-being benefits from PA ($n = 11$), however, the majority of participants ($n = 8$) indicated that having a low mood resulted in less PA behaviour. The main factors motivating PA participation for these mid-life women related to socializing with others and adding variety to daily routines. These are predictable motives, because isolation (e.g. loss of significant others), and monotonous daily routines (e.g. being retired) are concerns among older people. Given the high risk of health problems associated with being overweight, type 2 diabetes, and depression, it is not surprising that the major barriers to PA participation related to physical (e.g. associated pain, weight) and psychological (e.g. low mood) health, consistent with similar research. Although PA was perceived to have psychological well-being benefits, low mood was a main barrier for PA. Effective, individualized psychological interventions are needed to increase PA behaviour among this population, so that they can attain physical and psychological health benefits.

Keywords: *depression, overweight, motivation, mood, type 2 diabetes*

The narrative format model for second language learning in migrant pupils

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This presentation describes the results of an intervention for second language learning, using the Narrative Format Model, among first and second generation migrant children attending Italian primary school. The intervention lasted one school year (2008/2009) and involved first and second grade classes of a school in the province of Brescia, Northern Italy. It was implemented through narrative dramatic activities carried on in Italian, integrated in the general curriculum for migrant and non migrant pupils in an inclusive education setting. Italian language abilities were assessed in children participating in the language intervention and in a control group, in the same school. One hundred and one first and second grade pupils participated in the study, 56 were in the intervention group and 45 were in the control group. Receptive vocabulary, text comprehension and narrative production were assessed in both groups at the beginning (pre-test) and at the end of the language intervention (post-test) in order to assess the effectiveness of the narrative format activities for Italian language learning. As expected, results show a significant improvement of Italian language abilities among the experimental group with regard to complexity of sentence production. Moreover, both groups show improvement in receptive vocabulary and text comprehension. In conclusion, the effectiveness of the narrative format activities for teaching Italian to migrant children has been partially confirmed. It is important to note that the control group is not a "non-intervention" group: teachers in these classes carried on a traditional Italian language teaching activity with Italian and migrant children. This might explain why both groups showed improvements in observed abilities. Moreover, it is worth considering that the Narrative format activities have been positively evaluated by teachers, pupils and the school management, who decided to adopt this psycholinguistic model also in the current school year (2009/2010) in other classes.

Keywords: second language learning, language learning intervention, narrative format activities, psycholinguistic model, migrants

The normative practices of Australian mental health practitioners when assessing risk of violence in offenders

BARBER, D. (Edith Cowan University), DEAR, G. (Edith Cowan University)

This study aimed to: 1) explore the violence risk assessment practices of Australian psychologists and psychiatrists, 2) evaluate local violence risk assessment practices against international standards and, 3) explore the influence of various practitioner variables (e.g. training) and case characteristics (e.g. jurisdiction) on the local practices currently being employed. A combined exploratory-descriptive research design was employed to survey, identify, analyse and describe the violence risk evaluation practices of seventy-five Australian psychologists and psychiatrists with relevant experience. Participants completed an online survey about the type of assessment methods they employed in their most recent violence risk assessment for pre- or post-sentencing matters, the type of information they included in their report, and the way in which they communicated their risk evaluation to the decision-makers. Participants were also asked to provide qualitative explanations for their assessment practices and subsequent interviews with current participants will be undertaken to further explore the factors that influence local violence risk assessment practices. A follow-up study will also be undertaken with key stakeholders to elucidate the implications of the findings from the original study and investigate the needs of consumers of violence risk assessments. Conclusions drawn from the findings of this study and the empirical literature on violence risk assessments address a variety of practice-oriented research questions. The results are expected to contribute to the development of training programs and recognised professional standards and guidelines, which in turn, are anticipated to yield more empirically-based predictions of violence risk, satisfy legal standards and rules, and ultimately result in better risk-related decision-making. Efforts to enhance the provision of valid and reliable violence risk assessments is of particular importance following the introduction of Dangerous Offender legislation in numerous jurisdictions and the increasing reliance by courts and others legal decision-makers on psychological and psychiatric opinion regarding offenders' risk of violence at the time of sentencing or release from custody.

Keywords: *violence risk assessment, Australian psychologists, Australian psychiatrists, practitioner variables*

The Pain of Difference: The experience of shame and embarrassment amongst a sample of gay men living in Australia

BECKER, A. (La Trobe University)

Internalised homophobia has been extensively researched and implicated in the wellbeing of gay men. It has been suggested that shame may be the principle pathogenic factor in internalised homophobia (Allen & Oleson, 1999). Over the last few decades, shame has not received nearly as much research interest as has internalised homophobia. There is clinical evidence to suggest that shame, specifically internalised shame or a shame based identity, is predictive of poorer biopsychosocial outcomes in gay men. Whilst we have seen the 'depathologising' of homosexuality and the development of gay-affirmative psychotherapies, there is further need to develop our understanding of the experience of shame, and its correlates, amongst gay men. Qualitative research is being conducted with nine Australian gay men exploring their experiences of shame and embarrassment and how they have been affected by and managed to cope with these feelings within and or without psychotherapy. Preliminary findings and potential implications of this study will be discussed.

Keywords: *internalised homophobia, shame*

The potential of empathy in building healthier organizations

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Empathy has been defined as understanding and sharing in another's emotional state or context (Eisenberg & Strayer, 1987). It originated in Germany as "Eisfuhlung" and was initially used by Vischer (1873) in relation to the projection of self in an artistic object. It is believed that was introduced to psychology by Lipps at the

beginning of the twentieth century and coined as empathy by Tichner in 1909 as a way of knowing the conscience and understanding the other "in the muscle". Its development was continued and revitalized by personality theorists in the 1930's, Rogerian psychotherapists in the 1950's and the theorists of conditioning in the 1960's and more recently by social and evolutionary psychologists in explaining altruistic behaviors (Eisenberg & Strayer, 1987). Two traditions has been identified in the study of empathy, one stresses in its emotional components while the other equates it to the accurate perception of others, while a third one emerges from the work of Davis (1966) which suggests that is should be considered as a set of constructs. Empathy has been associated to important individual and organizational variables. The individual variables include: self-esteem, social skills, abilities, interpersonal effectiveness, and helping, customer service orientation and achievement, while the organizational variables include: organizational commitment, work performance and attendance to work, but not related to job involvement. Also empathy in supervisors has been related to higher employee satisfaction and lower levels of depression, anxiety and fatigue of their employees and higher productivity, but also with supervisor's leniency. More recent research has explored how it can be experienced via the Internet (Preece, J. and Ghozati, K. (2001). We believe that employees have been under-used in different societal settings, but especially in work settings. In this presentation we will explore the relation between empathy and organizational attitudes that have been related in literature to pro-social organizational behavior. We will propose empathy as a variable that not only has the potential to explain positive outcomes in work organizations but the value to be developed so that it may strengthen human relations and develop healthier individual and work environments.

Keywords: *empathy, organisational attitudes, human relations, work environment, employee satisfaction*

The power of optimism: A road to success?

HO, P. Y. (Chinese University of Hong Kong)

Previous researchers have investigated the benefits of optimism. Yet, most studies only use a comparative approach among control and experimental groups to support the idea that optimism enhances people's well-being. The current research tries to redefine success as a subjective goal achievement and investigate how optimism has an effect on achieving a self-determined goal. Task performance was measured using Google word puzzle among 118 young adults (43 males, 75 females). As hypothesized, dispositional optimism (LOT-R) was positively correlated with successfulness. Variables including proactive attitude, self-efficacy and confidence level were also measured, but no correlation with successfulness was found. Results predicted that optimism has a unique role in determining the individuals' successfulness. Further research is encouraged to investigate the mechanism for this result.

Keywords: *dispositional optimism, well-being, goal achievement, success, self-efficacy*

The power of positive action in therapy and leadership

KENNETT, K. (Life "Be in It" Education Pty Ltd)

The aim is to reinforce the importance of responses (actions) as the initiator of behaviour in therapy and leadership and the benefits of the power of positive action; to focus on the fundamental responsibility of psychologists providing therapy to acknowledge expertise in changing behaviour not merely treating symptoms and to re-discover that the order of experience is action followed by feeling and resulting in thinking. The application of the study of human behaviour is fundamentally seeking benefits to improve quality of life. For example, the positive behaviour of the therapist brings about effective improvements in the behaviour of the client and leaders can improve the overall lives of a community or nation. A review was done of leadership in terms of the concept, "*Positive Actions elicit Passion and create Visions*" © Kennett, 2009, involving application to life, leadership, and therapy and to advances

in psychology. Leadership is essential in examining the fundamental differences between psychology and psychiatry as allied professions. The importance of responses (action) is the initiator of all behaviour including effective behavioral changes in clients. Changing behaviour is the prime responsibility of psychologists. A brief review was done of past eminent psychologists and application to psychological therapy and their leadership, embracing the power of positive action in therapy and leadership. Adler reported, "*Trust only movement (action). Life happens at all levels of events, not word. Trust movement*". Skinner introduced the concept of operant conditioning. Both Adler and Skinner have been influential as leaders in focusing on competencies for effective behavioral changes resulting in many therapeutic approaches such as, for example, cognitive behavior therapy, rational emotive behavior therapy and holistic psychology. Applied psychologists and clinical psychologists continue to function in a "thinking-feeling-acting" way. "*Action has always been the primary and initiating event followed by feelings and consolidated in thinking*". Behaviour (actions), emotion (feelings) and cognition (thinking) are inter-related but the behavior, as Adler and Skinner, has already been identified as the primary event. Applied psychologists need to act based on knowledge and the cumulative structure of past actions. The cycle begins with action that elicits feelings (feelings of the heart) and results in structural thinking (both convergent and divergent). Reference is made to Kouzes and Posner (2008) in Leadership Challenge, namely, concepts of "*model the way (action), inspire (feeling) a shared vision (thinking), challenge the process, enable and encourage the heart*". In conclusion: "*Grasping the structure of life and leadership involves ongoing responses (action) taken by self and others that support inter-relatedness among practice (action), emotion (feeling) and theory (thinking) in more meaningful ways*". This also applies to the process of therapy and the taking of action by both practitioner and client. "*The fatal disconnection between practice (action) and theory (thinking) is still a challenge*" Research relies on 'either/or' decisions, while life continues to exist in the world of 'ands'. The structure of our thinking impacts on our actions. However positive thinking without action is

sterile. Constant reliance on incorrect ordering of how behaviour (responses patterns) occurs severely limits effectiveness as therapists and leaders. Therapists and leaders need to focus on the importance of “*Positive Actions elicit Passion and create Visions*” © Applied psychologists need to ensure research and critical thinking involves application - the need to recognize “*time to take ACTION*”. Effectiveness of knowledge relies on actions and implementation. Effective behavioral changes only occur through ACTION.

Keywords: *positive action, leadership, quality of life, behaviour change*

The power of written emotional expression on psycho-physiological health

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The present research examined the effect of written emotional expression on participant’s psychological health–affect [Positive Affect (PA) and Negative Affect (NA)], and cognition [components of the Impact of Event Scale (IES) i.e. intrusions, hyper arousal and avoidance, narrative analysis] and physiological health [Heart-rate (HR), Blood-pressure (systolic SBP) and (diastolic DBP)], and physical health (symptoms, perceived and general health). Ten participants were randomly assigned to each of three conditions- Trauma Condition, Happy Condition and Neutral Condition ($n = 30$). Each participant wrote for three days consecutively, and a follow up was taken after two months. Pre and post measures of writing were taken on affect using the Positive and Negative Affect Schedule (PANAS), cognition via the Impact of Event Scale revised (IES), and narrative content. Physiological arousal was assessed by recording Heart Rate and Blood Pressure, while physical symptoms and health were assessed using the SMU- health Questionnaire. Findings revealed significant short term affect changes across all the three conditions. The happy condition induced a significant reduction in heart-rate, health problems and symptoms. The trauma condition induced an elevated heart rate, and reduced health problems. The neutral condition also showed significant improvements in health problems. Narratives in the trauma condition

had greater usage of negative emotion words while narratives in the happy condition had more positive emotion words. These findings have been discussed in light of cognitive processing and confrontation – inhibition theory to understand the possible mechanism underlying health. All three conditions however showed significant improvements in long term symptoms and health problems. Hence, expressive writing does reap physical health benefits. Therefore it can be concluded that writing is an effective intervention to improve one’s health.

Keywords: *psychological health, positive affect, negative affect, physiological health, physical health*

The precedence of local features in Attention Deficit Disorder (ADD)

YONGNING, S. (Kyushu University), YUJI, H. (Kyushu University)

The purpose of this study was to examine the weak right hemisphere hypothesis in Attention Deficit Disorder (ADD) by comparing the performance of children with ADD to that of children without ADD on the processing of compound patterns. An ADD group ($N = 13$) and a paired normal group ($N = 13$) completed Navon (1977) tasks under three variations of attention procedure. The first was a divided attention procedure in which the target could appear at either the global or local level. The second was a shift attention procedure in which participants were required to shift their attention from a local-oriented task to a global-oriented task or from a local-oriented task to a global-oriented task. The third was a selective attention procedure in which the target always appeared at the global level or the local level. The local interference effect rather than global interference effect was observed in children with ADD regardless of the attention procedure, which was opposite to Navon’s finding of a global interference effect observed in normal individuals. The finding of a local interference effect in children with ADD suggests that people with ADD process compound patterns quite different from typically developing children, and they process local instead of global information automatically in a very early stage of processing.

The local interference effect confirmed the weak right hemisphere hypothesis in ADD and presented evidence against the DSM-IV criterion's (APA, 2000) deficit hypotheses of ADD that the inattention symptoms may manifest itself as a failing to give close attention to details. This study also suggests that the Global/Local information interference test may provide more information for diagnosis of ADD and, in regards to training, instead of solely paying attention to training of individual information cognition, the training of grasping global information should be stressed.

Keywords: *attention deficit disorder, attention, weak right hemisphere hypothesis, inattention symptoms*

The psychic states dynamic of a women's fencing team during preparation for the main season competition

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This research was carried out during preparation for the 2009 European championship, with the Ukrainian female fencing team participation. The methods used included theoretical generalization, the Luscher Colour Test and Friedman ANOVA. During the whole period of preparation, the individual differences of psychic state of sportswomen and the change trajectory of the whole team were analyzed. Such an approach was reasonable for research on organization of interpersonal space inside the team, its regulatory capabilities, and the state of formation of collective subject of activity. The analysis of the psychic state indexes testifies to the presence of increments in predominance of ergotropic balance in sportswomen's vegetative processes characteristics ($\chi^2_r = 10,19$; $\nu = 7$; $n = 4$; $p = 0,09$). It testifies to increment in activation potential of their psychic sphere. At the same time the current level of sportswomen's psychic tension came down gradually ($\chi^2_r = 6,52$; $\nu = 7$; $n = 4$; $p = 0,48$), the deviation scope from autogenic norm of psychic state normalized and testifies to increments in the comfort level of the team's psychic state ($\chi^2_r = 13,95$; $\nu = 7$; $n = 4$; $p = 0,04$), and the mental capacity steadied on the

high level ($\chi^2_r = 6,93$; $\nu = 7$; $n = 4$; $p = 0,43$). The frankest changes were registered concerning sportswoman's psychic state indexes to autogenic norm, and also concerning the coefficient of the vegetative activation. That testifies to increments in the comfort level of psychic state and the psychic activity of the whole team. Positive changes in psychic tension lowering and increments in mental capacity level were specified. Therefore, the positive dynamics in whole of the psychic state of the woman's fencing team during preparation for 2009 European championship can be specified. In conclusion, the control of a psychic state of sportsmen enables definition of the thresholds for the usual and extraordinary mental activity of the sportsman, his strategy and styles of self-control, their arsenal and efficiency, an opportunity to carry out correctional training actions on expansion and activation of regulatory resource of the athlete which can be constructed through the organization of ergo-informational space and results in a sensation of psychological sufficiency of resources to achieve high sports result.

Keywords: *sportswomen, psychic state, team change, self-control, psychological resources*

The psychological mechanism of Chinese overseas students' collective protests against Western Media

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Contrary to the image of impassionate bystanders of political issues, in the year 2008 before the Beijing Olympic Games, a large amount of Chinese overseas students protested against some major western media in many western countries. Based on the dual pathway model of collective action (Van Zomeren, Spears, & Leach, 2004), the present study aimed to understand the effect of collective discrimination, political trust of the Chinese government, motivational inference and national identity on two core constructs: group-based anger and group efficacy. One hundred and thirty nine students were surveyed with questions about national identity, collective discrimination and political trust of the Chinese

government. They were then asked to recall a report made by any western media institution about China or Chinese people which impressed them when they were in Germany and to answer questions about their inferences about: the media's motivation, attitudes of their peers (group emotional and action support), group-based anger and group efficacy, their former participation in these kinds of protests and behavioral intentions for future protests. Structural equation modeling (SEM) was performed using Amos 7.0 to investigate the possible relationships among all variables. The SEM results showed that group-based anger and group efficacy were the most immediate predictors of collective action. Further, group emotional support, collective discrimination and political trust contributed to group-based anger which was partially mediated by motivational inference of the media; on the other hand, political trust of the Chinese government, national identity and group action support contributed to collective efficacy. By confirming the dual pathway model of collective action, the present study further suggested that there would be different predictors of group-based anger and efficacy. Motivational inference could be a major mediator in the emotion-focused coping route, which could partly result from perception of past discrimination; political trust and national identity would provide a basis for legitimacy and external reward which could improve efficacy in the problem-focused coping route. The specific reason of this event and general themes about protest behavior in foreign countries was discussed.

Keywords: *media protests, collective discrimination, political trust, motivational inference, national identity*

The Queen Bee Syndrome in top positions in the Spanish Government: National and regional

PRIETO, J. M. (Complutense University), GARCÍA-VELASCO, O. (Complutense University)

The Queen Bee Syndrome was identified in 1973 and it entails that women in top positions in organizations appoint men as direct collaborators or team-mates. These women rarely appoint women in their near

surroundings. This research verifies whether this exists also in Spain. The complete database of appointments made by the prime minister, ministers in the cabinet, presidents of regional governments and deputy directors appointed by them, has been analyzed first qualitatively and afterwards quantitatively. The total amount of appointments analyzed has been 266 at the national and regional level in the whole country. The prime minister appointed 50% to 50%, whereas the only female regional governor behaved as Queen Bee. Eighty nine percent of appointments made by female ministers favoured men, none were within the Quota 40% to 60%, and 11% of appointments were women. Forty-eight percent of appointments made by female deputy directors in regions were men, 27% kept the 40% to 60% quota, and 13% appointed women. This confirmed the existence of Queen Bee Syndrome effects in top positions of the national and regional governments in the country. A quota system has been enacted by law by the government and the parliament but when top female politicians make decisions they prefer males as top policy makers in their near surroundings. The existence of a Ministry of Equal Employment Opportunities is not enough to change this mentality.

Keywords: *queen bee syndrome, equal opportunities, gender distribution in policy makers, gender quotas in organizations*

The relation between prior experience and emotional creativity: The role of mindfulness

WENJUAN, Z. (Beijing Normal University), HONG, Z. (Beijing Normal University)

This study explored the relationship between prior experience, mindfulness and emotional creativity. We examined whether prior trauma (such as parents' divorce or a serious accident) is associated with emotional creativity and the moderate effect of mindfulness. Both quantitative and qualitative data from Assessing Prior Trauma Events, the Mindful Attention Awareness Scale, and Emotional Creativity Triads, were gathered from 312 undergraduate students in Beijing. The results indicate that prior traumatic experience relates positively to emotional creativity. Multiple regression analysis

identified that mindfulness moderates the relationship between prior traumatic experience and emotional creativity after controlling for the effects of personality and emotional intelligence. Qualitative analyses were further made of 40 stories from subjects writing in response to the Emotional Creativity Triads Test. The result demonstrates that subjects with higher mindfulness scores are evaluating prior traumatic events more in a complex manner, and are less likely to reach premature conclusions; they can gain more benefits from overcoming hardships. Early trauma experience is positively associated with emotional creativity. Mindfulness can moderate their relations, and may facilitate subjects who are experiencing trauma events to explore more meaning regarding their prior experiences and appraise these events in a more complicated and mature manner.

Keywords: *trauma, mindfulness, emotional creativity, maturity, mindfulness attention awareness scale*

The relationship between daily goals and depressed mood

ASGARI, Y. (Deakin University), MILLER, R. J. (Deakin University)

Empirical evidence suggests that setting goals is inversely related to depression. The purpose of this longitudinal study was to examine the relationship between depressed mood changes and small daily goals. In this study, small daily goals have been classified as practical and emotional daily goals. Positive and negative cognition constructs were also examined in relation to the depressed mood. Data were collected from a community sample. A total of 178 adults of both genders (aged 18 to 70) participated in the first phase of this longitudinal study. After an eight week interval, 144 completed the questionnaires again. These questionnaire sets consisted of a demographic questionnaire, in addition to Explanatory Style, Optimism, Negative Thoughts, Hope, Mood and Daily Goals questionnaires. Findings showed that lower levels of emotional goals resulted in significant decrease in positive mood states and increase in depressed mood. This knowledge of individual daily goals is important for an

understanding of depressed mood. Furthermore, the predictiveness of positive constructs by depressed mood will be discussed.

Keywords: *depression, optimism, individual daily goals, mood*

The relationship between interpretation of religion and understanding about gender roles in marriage and the family

ENDUT, N. (Universiti Sains Malaysia), MOHDHASHIM, I. (Universiti Sains Malaysia), AZMAN, A. (Universiti Sains Malaysia)

This study examines group differences (gender, religion and ethnicity) in young adults' assessments of their level of religiosity and interpretations of related religious views about marital and family relationships and then their views about gender roles in these relationships. It further investigates the links between these sets of constructs. The respondents were 199 young adults who are compulsory participants of two camps of National Service training. They were selected to represent diverse socio-economic backgrounds. Respondents convened in a prepared venue and questionnaires were administered to them within scheduled time. For this study, they were required to answer three sections of questions: background information, a ten-item section on level of religiosity and interpretation of religious views about marriage and the family, and a 28-item section on views about gender roles in marriage and the family. Findings show that there is no difference in male and female respondents' assessments of their level of religiosity. There are differences between their assessments of level of religiosity based on their religion and ethnic groupings. Malay and Muslim respondents reported higher levels of religiosity compared to other groups. People who reported as more religious also reported more traditional views about gender roles in marriage and the family. Respondents who reported higher religiosity reported higher interpretations of the sanctity of marriage and higher leanings towards a patriarchal interpretation of religion. The study indicates that religion may play a role in how young people interpret gender roles. Youths who describe themselves as religious appear to have more traditional views about gender roles.

Those who demonstrate a patriarchal outlook to interpreting religious teachings tend also to have more traditional views about gender roles. Youths of a particular ethnic group and religion show a higher degree of religiosity than others. These youths also have the tendency to give patriarchal interpretations to religious teachings and to view gender roles in more traditional ways. Taking these implications into account, it is important to further explore the relationship between religiosity and views about gender roles by investigating more elements in religion that may bring about such views.

Keywords: *religiosity, marital relationships, gender roles, patriarchal interpretations, religion*

The relationship between keen social connectedness and attachment to parents and adults in college students

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MAJID, A. (Medical Sciences University)

The aim of the current study was to investigate the relation between keen social connectedness, attachment to parents, and adults in college students of the University of Tehran. To accomplish the stated goal 120 college students from the School of Psychology and Education were selected by means of random selection from different departments of the school, and the following scales were administered to them: Attachment to Parents Questionnaire (Hazan & Shaver, 1986), Adult Attachment Scale (Collins & Read, 1995) and Questionnaire of Keen Social Connectedness (Ghobary Bonab, 1999). Analysis of data with utilization of multiple regression analysis revealed that the magnitude of keen social connectedness can be predicted from attachment security (i.e. dependability on the partner) to adults. In addition, magnitude of the secure attachment was a significant predictor of keen social connectedness and having a good relationship with parents. In conclusion, the results indicated that quality of attachment is a significant predictor of keen social connectedness.

Keywords: *quality of attachment, social connectedness, adult attachment scale, attachment*

The relationship between personal and organizational values in an industrial company

POUREBRAHIM, S. (National Iranian Oil Refining and Distribution Company), REZA, H. (Isfahan University), ALAVI, S. K. (National Iranian Oil Refining and Distribution Company), SHIRVANI, L. (Isfahan University), AKHBARI, M. (Isfahan University), MOHAMMADI, M. (Isfahan University), FASIHIZADEH, N. (Isfahan University)

Schwartz has determined ten types of personal values including conformity, tradition, benevolence, universalism, self-direction, stimulation, hedonism, achievement, power and security. Organizational values are indeed the supervisor's ideas and beliefs of how to behave with a subordinate. As long as the organizational values match with employee's values the employee will be more satisfied and committed to the organization. In addition, they work better and show little desire to leave the organization. The purpose of this research is to investigate the congruency between personal and organizational values. This research was of a correlational kind. Using this method, 269 people responded to two questionnaires: the Schwartz Values Survey (Schwartz, 1996) and Organizational values (a researcher-made questionnaire, 2009). Factor analysis of Organizational values questionnaire showed three factors: Attention to human resources, competition and globalization and Commitment to the organization. The results showed that, there is significant relationship between conformity, tradition, benevolence, universalism with attention to human resources and values, conformity, benevolence with competition and globalization; also the value of conformity, tradition, and power had a significant relationship with the commitment to the organization. According to the results, coordinating personal and organizational values to each other is important in terms of training programs and Strategic Organizational Management. Although, all the Schwartz values seems to be important, some of them are more important.

Keywords: *personal values, organizational values, employee values, training programs, organisational management*

The relationship between personality and blogging

BAKER, J. (Swinburne University of Technology)

Previous research examining the Big Five personality traits found that openness and neuroticism predicted blogging behavior, with female gender moderating the relationship between neuroticism and blogging (Guadagno, Okdie & Eno, 2008). However the effect of neuroticism was only significant in the second of two trials, and the authors posited that openness may become less related to blog behavior as blogging becomes more mainstream. As blogging has increased significantly from the time of original data collection, and as the effect of neuroticism was intermittent, the present study aimed to replicate this study with a larger sample population. A sample of 583 internet users was recruited from Facebook.com to replicate the initial study by Guadagno et al. The sample was composed of 219 bloggers and 364 non-bloggers, with a mean age of 29.88 years old ($SD = 11.30$ years), and 60.7% of the participants were female. Personality factors were measured using Saucier's (1994) Mini Markers. In partial contrast to Guadagno et al.'s study, openness, but not neuroticism, significantly predicted blogging. Also no gender difference was detected for neuroticism on blogging. No differences in neuroticism were found between bloggers and non-bloggers in this study with an increased sample size, suggesting that the main personality difference lies in openness.

Keywords: cyberpsychology, internet usage, big five model of personality, social compensation hypothesis, social connections

The relationship between scientific evidence and professional practice in applied psychology: Questioning the APA's account of evidence-based practice

LYND-STEVENSON, R. (Flinders University)

The primary aim of the current proposal is to question the American Psychological Association's (APA's) account of evidence-based practice. The APA argues that efficacy research

(i.e. experimental research in controlled settings) but not effectiveness research (i.e. non-experimental research in natural settings) is suitable to evaluate causal hypotheses about the relationship between professional interventions and applied outcomes. An analysis was conducted to demonstrate that the traditional paradigm for causal research permeates recent announcements by the APA about the concept of evidence-based practice. The traditional paradigm must be rejected. The unified paradigm for causal research is detailed and indicates that the APA's account of evidence-based practice must be amended on two accounts. First, the causal conclusions reported in efficacy research are not superior to the causal conclusions reported in effectiveness research. Second, both efficacy and effectiveness research are necessary to evaluate the causal impact of professional interventions. The APA's account of evidence-based practice must be revised. In particular, the contribution of effectiveness research to evaluate the causal impact of professional interventions is more important than currently acknowledged.

Keywords: professional practice, efficacy, effectiveness research, evidence-based practice, experimental versus non-experimental research

The relationship between stressful life events and social adaption of Chinese teenage students: The role of social problem solving ability as a moderator

YANG, Y. (Beijing Normal University), ZOU, H. (Beijing Normal University), CHENG, Y. (Beijing Normal University)

This paper proposed a methodology to illuminate the role of social problem solving ability as a moderator when examining the relationship between stressful life events and social adaption of Chinese teenage students. The hierarchical sampling approach was applied in this study based on the responses from 2,157 Chinese teenage students in junior or senior high school, from Beijing, Shanghai, Harbin, Xi'an, Wuhan, Guangzhou, and Kunming. Questionnaires and surveys were used to collect the data from the sample. Three interesting findings were deduced from the analysis. Firstly, the stressful life events of Chinese teenage

students are embodied by their academic achievements and relationship with their peers, as well as the interrelationship and health condition of their family members. Secondly, the stressful life events of Chinese teenage students are considered as a prediction indicator for their social adaptation condition. Surveys show that those students with more experience of stressful life events possess lower abilities in social adaptation, which can be reflected by loss of confidence, unsuccessful handling of interpersonal relationships, and low efficiency at work, etc. Last, but not the least, the relationship between stressful life events and social adaptation is moderated by social problem solving ability. Individuals with stronger social problem solving ability have lower possibility of pessimistic social adaptation when they are suffering various stressful life events. It was concluded that social problem solving ability plays a vital role in addressing the relationship between stressful life events and the social adaptation of Chinese teenage students.

Keywords: stressful life events, social adaptation, problem-solving, moderator, Chinese students

The relationship between the behavior model of Marston and task quotient with employee turnover

POUREBRAHIM, S. (National Iranian Oil Refining & Distribution Company), REZA, H. (Isfahan University), MOHAMMADI, M. (Isfahan University), FASIHZADE, N. (Isfahan University), AKHBARI, M. (Isfahan University), SHIRVANI, L. (Isfahan University)

The current research is based upon the model of Marston or DISC (consisting of four basic components) and aligning an employee task mixture named Task Quotient (TQ) with Employee Turnover. There are many personality models, and each model uses various interesting personality dimensions to define a person's personality. Marston (1928) developed a personality model referred to as DISC that intended to explain people's emotional response and that measures four dimensions of human personality: Dominance, Influence, Steadiness and Compliance. TQ in this study is defined as the total combination of three tasks, routine (respective), trouble shooting (problem solving)

and project (planning). The statistical population was 6400 personnel of a public company and 270 personnel among them were selected randomly. Research instruments were DISC Personality Inventory (Marston, 1928), the TQ questionnaire (Gazzara, 2002) and Turnover intentions (Smitt, Crample & Porter, 1976). Multiple regression analysis was applied to the data. Results show that there are significant relationships between components of Compliance and Steadiness of DISC and Project planning of TQ and also between these two variables and turnover. Thus turnover and displacement are disadvantageous for organizations. Considering influential personality variables in turnover can help human resource managers to identify and select appropriate personnel that fit to work environment.

Keywords: employee task, personality models, emotional response, personnel selection, project planning

The relationship between trait anxiety, trait competitive anxiety, riding experience, accident/injury status, and state competitive anxiety for equestrian athletes

HOGG, R. (Charles Sturt University), HODGINS, G. (Charles Sturt University)

This study aimed to develop a deeper understanding of the mechanisms underlying equestrian athletes' state competitive anxiety levels. It also aimed to explore the relationship between state competitive anxiety and trait anxiety, riding experience, and accident/injury status for equestrian athletes, as these constructs have been linked to state competitive anxiety in broader sport psychology research. One-hundred and fifty-five equestrian athletes who ride competitively completed a questionnaire set distributed locally and online using equine-related businesses and associations. Demographic and information on participants' riding status was collected, and trait anxiety, trait competitive anxiety, and state competitive anxiety levels were measured. Trait anxiety was found to be significantly related to state competitive somatic ($r = .43$, $N = 130$, $p < .01$), and cognitive anxiety ($r = .50$, $N = 130$, $p < .01$). Trait competitive anxiety also

demonstrated statistically significant positive relationships with state competitive cognitive ($r = .80$, $N = 130$, $p < .01$) and somatic anxiety ($r = .83$, $N = 130$, $p < .01$). Trait anxiety and trait competitive anxiety predicted state competitive cognitive anxiety at a statistically significant level $F(5, 124) = 65.23$, $p < .0005$, and also predicted state competitive somatic anxiety at a statistically significant level $F(5, 124) = 86.20$, $p < .0005$. Subjective perceptions of accident/injury severity were found to be statistically significantly related to state competitive cognitive ($r = .37$, $N = 110$, $p < .01$) and somatic ($r = .33$, $N = 110$, $p < .01$) anxiety and to predict state competitive cognitive [$F(1, 108) = 17.34$, $p < .0005$] and somatic anxiety [$F(1, 108) = 13.18$, $p < .0005$] at a statistically significant level. The findings of this study suggest that because of the added dynamic of the horse, as well as other dynamics of equestrian sports, such as the high risk involved, the anxiety experience of equestrian athletes may be unique from that of other sporting populations. In other aspects, however, the results of this study indicate that equestrian athletes are similar to other athletic populations in their state competitive anxiety responses.

Keywords: *competitive anxiety, trait anxiety, state anxiety, equestrian sports*

The relationship of gender role with mental health and its components in employed women

ALIAKBARI DEHKORDI, M. (Payame Noor university)

In the present study, the relationship of gender role (masculinity and femininity) and mental health was investigated in employed women. For this purpose, a sample consisting of 500 employed women in administrations, organizations and administrative companies of Tehran city were selected randomly. All subjects answered all items of Goldberg's (1972) General Health Questionnaire (GHO) and Bem's (1981) Sex Role Inventory (Short Form). To analyze data statistically, Pearson's correlation coefficient and multivariate regression were used. The results of the research indicated that femininity and masculinity are positively correlated with each other. Femininity also has negative

correlations with mental health, anxiety, dysfunction and depression; but has no correlation with somatic signs. Masculinity has negative correlations with mental health and dysfunction; but has no correlations with somatic signs, anxiety and depression. In addition, the results of regression analysis showed that masculinity does not have a significant role in explaining mental health and its components. The results of this research showed that employed women are high in gender role (masculinity-femininity). Also, more study and research must be done about gender role in Iran.

Keywords: *gender roles, employed women, general health questionnaire, sex role inventory, femininity and masculinity*

The relationship of organizational commitment with effective variables on it

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Organizational commitment is a multinational construct that has a specific effect on job and work issues. The current research attempts to examine the relationship of organizational commitment with its 14 predictor variables such as participation in decision making, organizational citizenship behavior, job scope, confidence to supervisor, organizational confidence, job involvement, promotion opportunity, internal motivation, supervisory quality, job alternatives etcetera. Two hundred and seventy two males and females of 4700 employees of a public organization were selected by a random sampling method. Data were analyzed through path analyses and stepwise regression analyses. Stepwise regression results showed that promotion opportunity, job involvement, participation in decision making, pay satisfaction, confidence to supervisor, satisfaction with supervisor and

organizational confidence were most robust predictors of organizational commitment. Results indicate that some subtle variables have great impacts on organizations and their productivity. Thus managers must recognize these variables and their effects on organization. In this trend they can induce or change considerable variables and their effects, variables such as organizational commitment and its predictors that have very important effects on organizational success.

Keywords: *organisational commitment, organizational success, organisational management, productivity*

The relationship of risk taking propensity, emotional intelligence and entrepreneurial intentions

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Entrepreneurship is becoming a very relevant instrument in promoting economic growth and development in a country. However, in Indonesia only 0.18 percent from approximately 200 million people are entrepreneurs. It is important for Indonesia that women enter business as well as men, particularly those who are 'stay-at-home' wives and mothers who are not officially 'employed' who may have more time compared to those who work full-time. This study examined the degree of entrepreneurial intention and the factors that influence it in these women. The objective of the study was to identify the relationship between risk-taking propensity, emotional intelligence and entrepreneurial intentions. The research used a quantitative ex post field study design and correlational methods. To collect the data, this study used the modified Entrepreneurial Intention Questionnaire (EIQ), the Emotional Quotient (EQ) Questionnaire and Risk Taking Propensity Questionnaire which has been recently modified and validated. This research was conducted with stay-at-home wives and mothers ($N=128$) in Jabodetabek (Jakarta, Bogor, Depok, Tangerang and Bekasi area). Findings indicated that there was a positive and significant correlation between Risk Taking Propensity and Entrepreneurial Intention ($r = 0.598, p < .05$), as well as the positive and

significant correlation between EQ and Entrepreneurial Intention ($r = 0.540, p < .05$) among stay-at-home wives and mothers. Based on the results, it was concluded that higher risk-taking propensity and Emotional Intelligence is related to higher entrepreneurial intentions of the individual. It was also found that stay-at-home wives and mothers had a medium level of Entrepreneurial Intention. Based on these results, it was concluded that higher risk taking propensity and Emotional Intelligence is related to higher entrepreneurial intentions of the individual. As a result, care and action should be taken to develop the EQ and Risk Taking Propensity of stay-at-home wives and mothers, in order to increase their Entrepreneurial Intention.

Keywords: *risk taking, emotional intelligence, entrepreneurship, stay-at-home mothers*

The relationships among adult attachment styles, relationship-histories and marital attitudes among Filipino young adults

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The relationships between adult attachment styles, individuals' relationship histories and marital attitudes were studied. A survey was distributed among 179 single, Filipino, young adult professionals aged 21-31 years. To measure the Attachment Orientations of the participants, the study used the Experience in Close Relationships-Revised (ECR-R) Adult Attachment Questionnaire by Fraley, Waller and Brennan (2000). Scores were correlated with the participants' present relationship status, past relationship experience and number of romantic relationships. The researcher also correlated the ECR-R scores with the participants' perceived marital attitudes. Result showed that the Attachment-Related Anxiety and Avoidance scores were significantly correlated with one's present relationship status obtaining $r = -.267$ and $r = -.452, p < .01$ respectively. Anxiety and Avoidance scores were again significantly correlated with past relationships experience, however, Anxiety and past-relationships experience obtained $r = -.192, p < .05$ while Avoidance and past-relationship experiences

obtained $r = -.342$, $p < .01$. Further, when correlated with participants' number of romantic relationships, only Avoidance scores was significantly correlated with $r = -.207$, $p < .01$. In terms of perception of marriage, only Avoidance was positively correlated with their perceived age of marriage entry obtaining $r = .169$, $p < .01$ which shows the probability that the more avoidant a person is, the more they will delay their marriage entry. Moreover, a negative correlation was found between perceived satisfaction in marriage and Avoidance with $r = -.182$, $p < .01$. Nevertheless, both Anxiety and Avoidance negatively correlated with the Marital Attitudes Scale with $r = -.517$ and $r = -.492$ at $p < .01$ respectively. Furthermore, both Anxiety and Avoidance scores were negatively correlated with their perception of happiness, agreeableness and confidence in marriage. The findings further validated the ambivalence and fear in entering relationships of highly anxious and avoidant individuals, although it was more salient among avoidant participants as they were less likely to venture into romantic relationships. Moreover, highly anxious and avoidant individuals had negative attitudes towards marriage, although only those who were highly avoidant perceived more dissatisfaction in marriage and would more likely delay their marriage entry. The findings of this research are helpful in terms of relationship, premarital and family counseling.

Keywords: *adult attachment, attachment style, relationships, marital attitudes, Filipino*

The relationships between gambling severity and implicit attitudes towards gambling

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The characteristic problems of pathological gamblers are their attitudes towards gambling and their irrational cognitive expectations. Most pathological gamblers believe that gambling will ultimately bring them profit. This kind of positive attitude towards gambling is an important factor which facilitates gambling addiction behaviors to continue or relapse. Irrational beliefs and attitudes for gambling can be explicitly evaluated using self-report scales. However,

explicit attitudes which are assessed through self-reports can be manipulated in conscious awareness. Implicit attitudes, on the other hand, are activated automatically and can influence behavior outside the boundaries of consciousness. Thus the aim of this study is to investigate the relationship between problem gambling severity and implicit attitudes towards gambling using the Gambling-Implicit Association Test (G-IAT). Participants will consist of 40 undergraduate students who have gone gambling at least once. Prior to the task, they will be asked to take the Korean Form of the South Oak Gambling Screening (K-SOGS) questionnaire to evaluate gambling severity, and the Gambling Attitudes and Beliefs Scale (GABS) to assess explicit attitudes towards gambling. Participants' implicit attitudes towards gambling will then be evaluated using the G-IAT. The study is currently in progress. We predict that the K-SOGS will correlate higher levels of implicit attitude for gambling (G-IAT) than levels of explicit attitude for gambling (GABS). For participants with low K-SOGS scores, both implicit and explicit attitudes will predict gambling severity, but for participants with higher K-SOGS scores, implicit attitude will be more predictive of gambling severity than will explicit attitude. The expected results of the present study will suggest that positive implicit attitudes towards gambling are related to gambling severity. As high gambling severity individuals may show differences between implicit and explicit attitudes, we suggest that it may be necessary to assess them both in clinical situations which may in turn increase the predicting effectiveness for gambling severity.

Keywords: *gambling attitudes and beliefs scale, implicit association test, pathological gambling, irrational beliefs, implicit attitudes*

The road well travelled: The role of past experience in taking another's perspective

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The influence of past experience on empathy has rarely been investigated in the psychological

literature. In previous empirical research which has been conducted, *empathic outcomes* have been largely focused upon, such as interpersonal accuracy and affective responses. The influence of having experienced a similar situation to that of another person on perspective taking, a cognitive empathic *process*, has been largely ignored. The purpose of this study was to examine whether past experiences make it easier for individuals to take the perspective of another person in a new, but similar situation and the extent to which other perspective-taking strategies, such as switching places with the target or considering common or typical reactions, make the perspective-taking process less effortful. A sample of 152 undergraduate participants was provided with an induction to take the perspective of a vignette protagonist involved in a problematic interpersonal situation (relationship problems, bereavement, work conflict, sexual coercion). Participants then reported their perceived ease in taking the other's perspective, degree of similar past experience, strategies used to take the other's perspective, and emotional and cognitive responses toward the protagonist. Results revealed that similar past experience was the strongest predictor of ease in undertaking the perspective-taking task. Moreover, the extent to which similar past experience increased ease of the perspective-taking process was moderated by the extent to which the participant reflected on that past experience. Dispositional empathic tendencies had a limited influence on ease, and neither past experience or ease was found to be a significant influence on empathic emotion. Perceptions of process ease did, however, mediate the relationship between past experience and perceptions of accuracy and confidence in taking the other's perspective. The important role of past experience in taking another's perspective is addressed, in particular how this may be used in counselling and helping relationships, and ways in which self-related reflection and insight influence the taking of another's perspective.

Keywords: *perspective taking, empathy, counselling practice, self-reflection*

The role of aggression and evaluation of emotion regulation on adolescents' aggressive behavior

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The incidents of juvenile delinquency, especially those involving aggression have risen in recent years. Compared to non-delinquent adolescents, do these aggressive juvenile delinquents demonstrate behavioral and emotional differences? This study investigates the role of implicit aggression and implicit evaluation of emotion regulation in discriminating aggressive juvenile delinquents and test if the roles are gender-specific. Ninety-three aggressive juvenile violent delinquents and 130 age-matched high school students took the Aggression Questionnaire (AQ; Buss,1992), Emotion Regulation Questionnaire (ERQ; Gross & John,2003), Implicit Aggression Association Test (self-edited) and Implicit Evaluation of Emotion Regulation Test (Iris,2006). Logistic hierarchical regressions were conducted on aggressive and non-aggressive behaviors. It was found that implicit aggression has a significant predictive effect. That is to say, the stronger the implicit aggression is, the more likely adolescents are to commit violent crimes. Another interesting finding is that gender regulates the predictive effect of the implicit evaluation of emotion regulation on juvenile delinquency. For females, those who are more controlled in implicit evaluation of emotion regulation tend to be more aggressive than otherwise. However in males, implicit evaluation of emotion regulation could not predict adolescents' aggressive behaviors even after controlling explicit aggression and explicit evaluation of emotion regulation. This study revealed the predictive effect of implicit aggression and implicit evaluation of emotional regulation on adolescents' violent crimes and the regulative effect of gender on implicit evaluation of emotional regulation. The possible mechanism behind the finding and the influence this finding has on adolescents' education are discussed. In conclusion, both implicit and explicit aggression can significantly predict violent crimes. Under the explicit conditions, explicit aggression has a strong predictive effect, yet its predictive power is regulated by explicit evaluation of emotion regulation, that is to say the predictive power is not significant on those who tend to express an explicit evaluation of emotion regulation. When

explicit aggression and explicit evaluation of emotion regulation are controlled, the implicit variables are tested. The research finds the predictive effect of implicit aggression is still significant and the predictive effect of the implicit evaluation of emotion regulation is edge significant, which is regulated by gender.

Keywords: *emotion regulation, delinquents, implicit aggression, evaluation*

The role of child rearing training skills in reducing mothers' stress and children's behavioral problems

FARZADFAR, Z. (Shahid Beheshti University)

The present research examined the efficacy of parenting skills training in preventing stress in a non-clinical sample of mothers, and in reducing behavioral problems among their children. The Parenting Stress Index (PSI; Abidin, 1990) was administered to an original sample of 198 mothers. Fifty-one mothers who scored highest on the PSI were chosen and randomly assigned to two experimental ($N = 26$) and control ($N = 25$) groups, and completed the Child Behavioral Checklist (Achenbach, 2001). Quantitative data were analyzed using pre-post test (t test), correlation coefficient, and multiple covariance analyses. Findings showed that after intervention: a) mothers in the experimental group showed lower levels of stress, as compared to mothers in control group, b) children of mothers in the experimental group showed less behavioral problems than children of mothers in the control group. In conclusion, parenting skills training reduces maternal stress and children's behavioral problems. This procedure may occur because parenting skills directly affect maternal stress reduction and subsequently their children behavioral problems decline. On the other hand parenting skills may empower mothers to manage difficult behaviors, and as a result, maternal stress decreased.

Keywords: *parenting skills training, mothers' stress, children's behavioral problems, child behavioral checklist*

The role of coping in the intergenerational transmission of problem gambling

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There is now substantial evidence that children of problem gamblers are more likely to develop gambling problems themselves than the children of non-problem gamblers. However, little is known about the risk and protective mechanisms associated with the transmission of gambling problems from parents to their offspring. The current study aims to evaluate the role of coping in the intergenerational transmission of problem gambling in a sample of adolescents. The sample consisted of 612 students aged between 12 and 18 years from secondary schools in Victoria. Participants completed self-report measures evaluating parental (paternal, maternal) problem gambling, adolescent problem gambling, and coping (productive coping, non-productive coping, and reference to others). The findings revealed that there was a weak but significant relationship between paternal and adolescent problem gambling but that there was no significant relationship between maternal and adolescent gambling problems. The findings revealed that non-productive coping (avoidance strategies generally associated with an inability to cope) was a mediating mechanism underlying the relationship between paternal and adolescent problem gambling and that productive coping (attempting to solve the problem whilst remaining physically fit and socially connected) served to mitigate the transmission of paternal gambling problems to adolescents. The identification of the role of coping in the intergenerational transmission of gambling problems is important in informing the design of targeted prevention and intervention programs necessary to reduce the transmission of problem gambling from one generation to the next.

Keywords: *coping, problem gambling, intergenerational transmission, avoidance, adolescents*

The role of dissociation in conceptual and perceptual processing in chronic Posttraumatic Stress Disorder

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This study explored the role of dissociation in perceptual and conceptual processing of trauma-related material in chronic Post Traumatic Stress Disorder (PTSD). In clinical participants with and without chronic PTSD ($N = 50$) matched on age and gender and geographic location, a computer presented experimental study investigated perceptual and conceptual priming for trauma-related, general threat, and neutral words in "Troubles"- related trauma survivors in Northern Ireland. Measures of state and trait dissociation, state anxiety and general psychiatric symptoms were also assessed. Evidence of enhanced perceptual priming in PTSD for trauma stimuli was found along with a lack of conceptual priming for such stimuli. State dissociation made a significant contribution to predicting priming for trauma words. The findings show the importance of state dissociation in trauma-related processing and posttraumatic symptoms. Because of its association with perceptual processing, dissociation may be particularly important in the development of intrusive PTSD symptoms, like flashbacks and nightmares.

Keywords: post-traumatic stress disorder, dissociation, perceptual processing, conceptual processing, trauma

The role of emotional intelligence and empathy in adolescent bullying behaviours and peer victimization

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The aim of this study was to examine the role of Emotional Intelligence (EI) and empathy in adolescent bullying behaviours and peer victimisation. The sample consisted of 68 adolescents and eight teachers from a secondary college in southeast Melbourne. Student participants completed a self-report

questionnaire which assessed their EI, empathy, social desirability and how frequently they engaged in bullying behaviours and were the target of peer victimisation. Teachers were asked to rate the peer relations of students. Results of the study indicated that EI particularly the dimensions of emotional decision making and emotional management and control, significantly predicted the propensity of adolescents to be subjected to peer victimisation. EI and empathy were also associated with adolescent bullying behaviours. It was concluded that anti-bullying programs in schools could be improved by addressing deficits in EI in adolescents who are at a greater risk of being subjected to peer victimisation.

Keywords: Emotional intelligence, bullying, victimization, adolescence

The role of extracurricular activities in developing students' self concept

DEWAJANI, S. (Gadjah Mada University)

The study investigated the relationship between extracurricular activities to improve elementary school students' self concept; types of extracurricular activities which can improve elementary school students' self concept; and the duration of effective extracurricular activities to improve elementary school students' self concept. The study used a correlational design to confirm the relationship between extracurricular activities and elementary school students' self concept, using a sample of 296 students of Jogjakarta province elementary schools. Students' self concept was measured using the SDQ 1 (adapted from Marsh (1985)), and extracurricular activities were collect by the Student Extracurricular Activities Questionnaire (SEAQ). The result of the study showed that there was a significantly correlation between students' self concept with their numbers of extracurricular activities involved ($r = 10.121$; $p = 0.01$), and that there was no significant correlation between students' self concept with their duration of performing extracurricular activities in a week ($r = 0.889$; $p = 0.101$). Additionally, there were no significant differences between students' self concept with Arts ($F = 0.712$; $p = 1.09$) and Sports

extracurricular activities ($F = 0.952$; $p = 0.299$). However, there were significant differences between students' self concept with boyscout (Scout) ($F = 9.297$; $p = 0.03$); Science ($F = 8.228$; $p = 0.04$) and religious ($F = 8.344$; $p = 0.04$) extracurricular activities. In order to improve students' self concept, as one of the important aspect of children personality development, it is recommended that schools should arrange extracurricular activities for students to train and develop their self concept. This extracurricular activities is the place for students to determine and evaluate themselves. Additionally, schools could arrange extracurricular activities that encourage strong relationships between students and their tutors, such as boy/girl Scout; religious activities and Science activities. Overall, the research found that the duration of each extracurricular activity does not have any impact on the students' self concept, and therefore it is not to say that the longer the activities the better. The more important aspect is the quality of tutor relationships.

Keywords: self-concept, students, extra-curricula activities, student extra-curricula activities questionnaire

The role of international accessibility law on the psychological outlook and physical functioning of people with disabilities

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This presentation examines the role that international accessibility laws play in the psychological and physical functioning of People with Disabilities. Given that the wheelchair accessibility of a disabled individual's environment plays a large role in how People with Disabilities function in different societies, this theory was examined through a literature review and legal research on international accessibility law, then integrated with qualitative data of the presenters' (one of whom has a physical disability) personal experience of travel to different countries. Analysis of literature and disability legislation revealed that various disability rights laws enacted throughout the world differ not only in their structure and coverage, but also in the way they are enforced

and how they impact various societies. As disability is influenced by the societal values and the environment, different societies will have different concepts of disability and how it is protected by law. This will affect the level of access an individual has to accommodation, housing, and opportunities in different societies. In addition to physical functioning, the level of access the law provides impacts psychological variables such as self efficacy, self-esteem, and attitude towards disability. Success of disability laws depends mainly on the actions and attitudes of individuals in society who must enforce it by removing architectural and communication barriers and providing accommodations. Understanding the role that law plays in the psychological and physical functioning of people with disabilities is crucial for psychologists and other rehabilitation professionals aiming to utilize interventions to help patients with disabilities lead more independent and fulfilling lives. This research offers valuable insight into how people in different countries perceive disability and the need for global communication on the topic.

Keywords: disability perception, disability, accessibility laws, rehabilitation

The role of narcissism in social anxiety

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Recent ethological theories of social anxiety have emphasized that social anxiety is related to perceptions of social rank. While a submissive type of social anxiety (cf. DSM-IV-TR) has been extensively studied, recent cluster analytic studies have identified a variation associated with dominant/aggressive, impulsive and disinhibited behaviours. Viewed through the lens of Personality Psychology, this type shares similarities with narcissistic personality. Therefore, the current study sought to explore the role of narcissism in social anxiety. In response to notices on social anxiety websites, 349 people completed a questionnaire. The questionnaire measured social anxiety (Social Interaction Anxiety Scale), narcissism (Narcissistic Personality Inventory), covert narcissism (Hypersensitive narcissism scale),

narcissistic pathology (Narcissistic Personality Disorder scale), anger (Dimensions of Anger Reactions), Shame (Experience of Shame Scale) and Depression (Depression, Anxiety, Stress Scale). The sample was heterogeneous with 150 participants in North America, 141 in Europe, 40 in Australia/New Zealand, 10 in Asia, and seven in other regions. Ages ranged from 18 to 74. Cluster analysis of the data revealed the presence of five distinct social anxiety clusters. Subsequent multivariate analysis indicated that the groups significantly differed on social anxiety, narcissism and anger. On the basis of group differences in these variables, the groups were labelled: narcissistic social anxiety group (NSA), covert narcissistic social anxiety group (CNSA), angry covert narcissistic social anxiety group (AnCNSA), general social anxiety group (GSA) and low social anxiety group (LSA). In terms of social anxiety, the covert narcissistic groups were more impaired than the other groups. Additionally, all three social anxiety groups with narcissistic characteristics evinced higher scores on measures of depression and shame than the non-narcissistic social anxiety groups. The current results are consistent with Paul Gilbert's ethological model of social anxiety. Viewed from this perspective, the narcissistic social anxiety groups can be characterised as individuals who have a perception of low social rank (high social anxiety) coupled with a desire for power, control and grandiosity (high narcissism) but feel unable to "challenge" those perceived to be dominant for fear of the interpersonal consequences of such a challenge. More broadly, the current results suggest that social anxiety is a broad and heterogeneous phenomenon, and that re-analysis of social anxiety using alternative theoretical paradigms (such as ethology) yields meaningful distinct variations of the disorder.

Keywords: *social anxiety, narcissism, ethology, shame, personality psychology*

The role of personality, intelligence, attitudes to education and use of study strategies in academic success in final year secondary and first year tertiary students

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The aim of the current study was to explore the effect of personality, intelligence, perceived value of education, perceived view of school, view of intelligence and use of study strategies on student academic achievement in final year-secondary and first year-tertiary students. Participants were 655 final year tertiary students who completed a questionnaire containing scales measuring the above variables. Study strategies included short and long-term time management, critical thinking, elaboration, rehearsal and peer learning. Participants gave the researcher consent to access their 2008 examination results. In 2009, those students who went on to tertiary study at the University of Canterbury were contacted and asked to complete a similar questionnaire to the one they completed in 2008. Sixty-two students completed the questionnaire and gave consent for the researcher to access their 2009 university results. Multiple regression analyses found that a number of variables significantly predicted academic achievement in final year secondary school, including sex, intelligence, personality (conscientiousness, openness to experience), and use of critical thinking skills. Data analysis of university results is currently being conducted. Correlations will be generated to determine the variation in responses between 2008 and 2009. Multiple regression analysis will be used to determine the relative influence of the variables measured on academic outcomes at a tertiary level. If there are differences in the factors that influence academic success in secondary school compared with a tertiary setting, this has implications for the education and guidance services that should be offered in these settings. Secondary schools may need to consider the support that students require to make a successful transition to tertiary study depending on the relative usefulness of different strategies in the two settings.

Keywords: *academic success, secondary students, tertiary students, intelligence, attitudes*

The role of regulatory anticipation, regulatory reference, and regulatory focus on health behavior

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This study examined self-regulation in relation to health related behavior (health behavior), in people of DKI Jakarta. The aim of this study is to understand how people living in DKI Jakarta regulate their self in order to maintain their health behaviors, including the self-regulation principles they use. Using three principles of self-regulation; regulatory anticipation, regulatory reference, and regulatory focus (Higgins, Grant, & Shah, 1999) this study examined the role of those principles on health behavior of people living in DKI Jakarta. Anticipation varied into two types, namely (1) anticipation of pleasure or success in the future, and (2) anticipation of failure or pain in the future. The memory of past experience divided into two, namely (1) recollection of success or pleasure, and (2) memory of failure or pain. Self-regulation strategies varied into (1) regulatory focus promotion and (2) regulatory focus prevention. Health behaviors are divided into health promotion behaviors and health prevention behaviors. A total of 385 citizens of DKI Jakarta (200 males and 185 females) participated in this study as respondents of survey and questionnaire. Each participant responded to questionnaires which measure their regulatory anticipation, regulatory reference, regulatory focus, and health behavior. Data analysis using multiple correlations and multiple regression techniques indicated the role of self-regulation principles on health behavior and preventive regulatory focus and preventive behavior. However no significant relation with regulatory anticipation of pain and preventive behavior was found. This study concludes that self-regulation in order to achieve health is influenced anticipation, memory of past experiences, and self-regulation strategies used.

Keywords: *health related behaviours, self-regulation, regulatory anticipation, regulatory reference, regulatory focus*

The role of self efficacy and resiliency as moderating effects between job demand variables and boredom stress

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Boredom stress as a negative effect of a new public management policy has not been extensively researched in Indonesia, although the impact of this psychological state is pervasive on individual performance in workplaces. Research in the field has shown that job demand variables (quantitative workload and job characteristics) are significant predictors of boredom stress. We assumed that the effect of job demand variables on boredom stress would be moderated positively and negatively by personal resources variables (self efficacy and resiliency) in the changing work environment, due to a new public management policy in Indonesia. This study employs 213 employees from the regular units of Directorate of General Treasury – Indonesian Ministry of Finance. as participants. Data were analyzed using univariate statistics methods (moderated hierarchical multiple regression). The result shows that workload quantity and task characteristics negatively affect boredom stress. Thus, both variables are significant predictors of boredom stress. Self efficacy failed to positively moderate the effect of job demands variables on employees' boredom stress. On the other hand, resiliency shows a negative and significant effect as a moderator variable of the relationship between job demands and boredom stress. Resiliency is more useful and necessary than self-efficacy in dealing with underload conditions at work, to reduce the potential emergence of boredom stress as one of the negative consequences of change in units having the same work characteristics.

Keywords: *boredom stress, public management policy, job demands, personal resources, workload*

The role of self-efficacy and non productive coping strategies as mediating the relationships between insecure attachment and NSSI (Non-Suicidal Self-Injury)

GIDEONI-COHEN, S. (Monash University), HASKING, P. (Monash University), SABURA ALLEN, J. (Monash University)

Non-suicidal self-injury (NSSI) is a phenomenon on a rise which peaks during adolescence. This study examines the risk factors such as insecure attachment with mother, father and peers, low

self-efficacy and non-productive coping strategies; and their relationship with NSSI in a community sample of young people. The sample included 275 young people (aged 13 – 26), who completed a self-report questionnaire assessing the constructs of interest. Insecure attachment with the mother, insecure attachment with father and peers were found to be related to NSSI. Nevertheless, these relationships were mediated by low self-efficacy and non-productive coping strategies. It may be that low self-efficacy is at least partly a product of the negative internal working models which were established as a result of insecure attachment relationships. Also, it was found that NSSI peaks in early adolescence until mid adolescence. In regard to the peak age and to low self-efficacy which was found to be central as this is the cognitive process which comes previous to the selection of coping strategy, the implications consider the possibility of prevention program to improve self-efficacy perception at the departure from childhood to adolescence.

Keywords: *self-injury, self-harm, attachment, self-efficacy, coping strategies*

The role of self-perception and third-person-perception concerning intergenerational knowledge transfer

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The demographic change in industrial countries like Austria entails ageing societies (Klein, Lher & Wilbers 2008) and ageing workforces (Frerichs, 1998, Becker/Naegele 1993). Regarding this change, the project “Diversity and Knowledge Management” funded by the Austrian National Bank aims to analyze how intra-company self-perceptions and third-person-perceptions of different generations influence knowledge transfer. Elder workers provide important sources of organizational knowledge (Krenn, 2001). At the same time, they can be seen as rigid (Argyris 2006, Nelson & Winter, 1982). Young workers lack the specific experiences linked to the company’s history (Lave & Wenger, 1993). This may – combined with the different age-related upbringing and imprinting – lead to a

more flexible behavior (Sennett, 2008). Conflicts arising from these different working styles manifest in speech by using certain metaphors (Lakoff & Johnson 2007). To analyze the metaphors-in-use by company members concerning self-perception and third-person-perception, interviews with members of all hierarchical levels have been conducted in small and medium enterprises across different sectors. The data was analyzed using atlas.ti. The method included a triangulation of Grounded Theory (Strauss & Corbin 1996) and Qualitative Content Analysis (Mayring 2007), focusing on metaphors-in-use. The analysis of metaphors-in-use shows and explains differences between elder and younger employees in the organizational context. The results help to get an understanding of the organizational culture and, as a consequence, an understanding of enhancing and the constraining factors of knowledge transfer on a linguistic level.

Keywords: *ageing workforce, intra-company self-perceptions, organisational culture, intergenerational knowledge transfer, metaphors-in-use*

The role of social psychology in alleviating poverty and increasing well-being through women's empowerment

TAKWIN, B. (University of Indonesia), MARKUM, M. E. (University of Indonesia), PRIMALDHI, A. (University of Indonesia)

The purpose of this study is to construct a model of for alleviating poverty through women’s empowerment by facilitating them to start a small business. Thus empowerment is achieved by successfully increasing family income through small business ventures. This research was conducted over a six-month period using a quasi experimental research design. A total of 100 housewives (age range from 21 to 55 years old) from two poor communities, Depok City and DKI Jakarta, participated in this study. Attrition rate was quite high; only 59 participants completed the whole program (23 people in Depok, 36 people in DKI Jakarta). In order to facilitate the development of individual and group empowerment, participants were first trained to develop individual traits through a series of activities during the intervention program.

Participants participated in activities to increase self-efficacy, self-esteem, trust, cooperation, and need for achievement. These traits were deemed necessary in order for the participants to develop a small scale business venture. Participants were divided into groups where they brainstormed potential business ventures utilizing the resources they had, then designed the product/service which they would provide, and then implemented their business plan. The measure used in this study was a behavioral check-list to record behavioral observation data related to the research variables. Two groups from Depok managed to increase each member's income by 40% at the end of the program. Almost all indicators of social aspects showed an increase. One indicator which did not show sign of increase was the measure for subjective well-being; participants did not show an increase in general satisfaction with their life, and it was assumed that participants were striving for a better overall condition of their life. Overall, the model shows early indications of successfully facilitating the development of business among women in poor communities. Further refinement of the model is required in future studies.

Keywords: *well-being, poverty, women's careers, self-efficacy, need for achievement*

The role of subtitles in the children's incidental learning

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The present study examined the role of subtitles in first and third grade pupils' incidental learning on a reading alone condition. Participants were 40 first grade and 40 third grade pupils (20 low reading level and 20 high reading level children in each grade according to their Chinese test scores and their Chinese teachers' evaluating to their reading level). In the experimental design, three factors were participants' reading level (high and low reading levels), subtitle forms (with pinyin and no-pinyin), and new dense words (high and low dense). The experimental materials were 4 videos, where each grade used 2 of them which included high and low new dense words. Each child watched 2 videos with high and low dense words and pinyin (no-pinyin)

subtitles alone. The results showed (1) the first and third grade pupils acquired new words with incidental learning, and acquired more new words in condition of the high new dense words than low new dense words in the task of watching video program with subtitles; (2) first-grade children with the low reading level acquired the same quantity of new words as first-grade children with high reading level in the condition of subtitles with pinyin, but their quantity of new words were significantly lower than the high reading level students in the condition of no-pinyin subtitle; (3) third-grade pupils with high reading level learnt more new words than pupils with a low reading level, but the quantity of new words that third-grade children acquired in the conditions of pinyin subtitle were not different from the condition of no-pinyin subtitles. The findings of the research indicated that incidental learning that made use of subtitles is a favorable method of enlarging children's vocabulary, specially, for first-year children.

Keywords: *incidental learning, reading level, subtitles, dense words, children's vocabulary*

The role of the internet for same-sex attracted youth

OVERTON, N. (RMIT University)

Australian studies have shown that same-sex attracted youth (SSAY) experience higher levels of bullying and victimisation in school settings, and are at a higher risk of substance abuse, mental health issues, self-harm, and suicide. Fear of harassment or rejection from peers and family are one reason many SSAY chose not to disclose their sexual feelings or identity. This can result in feelings of isolation and loneliness, and a lack of visible supports. The internet has unique qualities such as high levels of anonymity and lack of geographical distance that increase opportunities for users to make connections with similar others. The aim of this research is to examine how SSAY across Australia use the internet as a means of finding information, forming and expressing their sexual identity, and forming friendships and a sense of community. What are the characteristics of SSAY who do, and alternatively do not, use the internet to

explore their sexual identity? Quantitative analysis will be employed to explore variables such as age, gender, rural/urban setting, cultural background and sexual identity. Additionally, who discloses their sexual identity, or “comes out” online? Qualitative analysis will then be used to ascertain themes around the function that internet use serves for SSAY. These questions form part of a larger national study and it is expected that approximately 2,000 SSAY people will participate in this study. Data collection is currently being undertaken, and will continue until April 2010.

Keywords: *same-sex attracted youth, internet usage*

The significance of family support programs for mothers of very-low-birth-weight children: A case study of a mother who had worries about the development of her child

NOI, M. (Seinan Jo Gakuin University)

This case study tried to discuss the significance of family support programs for mothers of very-low-birth-weight children, through a case of a mother who had had serious worries about the development of her child. The case involved a mother who had joined the group of family support programs for children with very-low-birth-weight and their families. She had serious worries about her child's development and wanted to know the developmental characteristics of very-low-birth-weight children. Family Support Programs: Mother-Child Play Activities and Mother Meetings, were done for two months (13 sessions). Children with very-low-birth-weight at the age of 2 to 3 and their families had joined voluntarily. At the beginning, she saw her child as “my child born with very-low-birth-weight”, and could not approve of child's characteristics. However, through the intervention with her to recognize the “child's own developmental characteristics” and the “reasons of the child's behaviors”, her outlook on “my child” changed to “my child has difficulties to get into the group”, and finally, “my child is developing in her own way”. She also had started to talk more about her child's behaviors at home. The intervention for her was aimed at noticing the child's own characteristics,

and to understand reasons of child's behaviors, and mother's outlook on “my child” has changed. Other mothers' support was also effective for this case.

Keywords: *family support programs, mothers, low birth-weight children, mother-child play activities*

The spirit is willing, but the flesh is weak, or rather: The flesh is willing, but the spirit is weak? When automatic associations prevent physical exercise

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Models employed in exercise psychology highlight the role of reflective processes for explaining behavior and behavior change. However, as discussed in the social cognition literature, information-processing models (dual-process models) also consider automatic determinants of behavior. We examined the relevance of automatic processes for predicting physical exercise. Applying a priming task in a quasi-experimental design, we assessed the automatic evaluations of exercise stimuli in physically active sport and exercise majors, physically active non-sport majors, and inactive students ($N = 94$). Two different affective priming tasks were used: one task applying sport-specific (experiential) positive and negative target words and the other task using target words of generic valence. A second study was run as a conceptual replication ($N = 74$), using only the sport-specific priming task, but involving a student sample across the complete spectrum of activity and exercise intentions. Results of both studies showed that physically active students responded faster to positive words after exercise primes, while inactive students responded more rapidly to negative words. As a cautious note, findings were obtained only with sport-specific experiential items reflecting negative and positive consequences of exercise. Reaction times of the sport-specific priming task, however, successfully predicted the reported amounts of exercise in regression models. The results illustrate the significance of dual-process models in sports psychology. Specifically, affective states

at the automatic level such as automatic evaluations are an important ingredient in exercise behavior, which need to be taken into account when targeting at behavioral changes.

Keywords: *automatic associations, physical activity*

The state of psychology in Alaska

RICH, G. (University of Alaska Southeast)

This presentation focuses upon psychology in Alaska, which became the 49th of the 50 United States in 1959. With the exception of its largest city, Anchorage - home to about half of the state's approximately ½ million people - Alaska is largely rural. For instance, there would be sixteen people in New York City if it had the same population density. Alaska is plagued by social problems. Compared against the national average for sex crimes, Alaska ranked 43rd among all states. Since 1976, Alaska has ranked in the worst five states for its rate of reported rape. Substance and alcohol abuse also plague the state. Some polls listed the state as fifth worst in the nation for its assault rate. Alaska ranks among the worst five states for its domestic violence rate, with Alaskan women being killed by a partner at 1.5 times the national average. Alaska's school dropout rate (8 percent) was double the national average in 2005-2006. Thirty-eight percent of ninth-graders will have no high school diploma in 10 years, according to an Alaskan Commission, which found that Alaska ranks 50th (last), in the number of ninth-graders who will likely have a bachelor's degree in ten years. Alaska's suicide rate is consistently one of the highest in the nation. In 2002, Alaska had almost twice the national average of suicides at 10.6 for every 100,000. Other health problems impact the state. For instance, from 2000 to 2007, Alaska had the first- or second-highest nationwide Chlamydia infection rate. There also are severe financial challenges. A poll of the ten most expensive cities in the U.S.A. listed three Alaskan cities: Anchorage, Fairbanks, and Juneau. Alaska leads all states with the highest median credit card debt, based on 2006 information. Finally, the climate greatly impacts the state. In addition to the snow and extreme temperatures, Alaska ranks number one in the U.S.A. for earthquakes.

Against such a backdrop, what is the role and status of psychology in Alaska? This presentation will survey best practices from a positive psychology point of view, including a description of services provided by other helping professionals.

Keywords: *Alaska, rural, crime, substance abuse, positive psychology*

The structure of attachment mental model in middle childhood

MURAKAMI, T. (University of Tsukuba), SAKURAI, S. (University of Tsukuba)

Given recent evidence for multiple attachment models, we examined the structure of attachment mental models in middle childhood. We aimed to compare three models, that is, the Hierarchy model, Integration model, and Independence model. In examining the structure of mental models, we considered coincidence of mental models for each multiple attachment figure. In the Hierarchy model, the mental model for the first attachment person should strongly influence the mental model for other attachment persons. In the Integration model, mental models for specific persons should be integrated by a general model. In the Independence model, mental models for specific persons should be separated, and independent. Respondents were 541 elementary school students (253 boys and 288 girls). First, we identified attachment figures of the children. Attachment figures were assessed by nomination of three important persons in proximity-seeking function, secure haven function, separation protest function, and secure base function, drawn from Hazan and Zeifman (1994). Second, we measured children's attachment mental models for each of these attachment figures. Mental models were assessed in two dimensions. One dimension is avoidance of intimacy/other-model and the other dimension is anxiety of abandonment/self model based on Bartholomew and Horowitz (1991). Correlation analysis revealed that the mental models of three persons are modestly related ($r_s = .46 \sim .37$ in avoidance dimension, $r_s = .65 \sim .61$ in anxiety dimension). The Independence model was not supported. Subsequently, SEM analysis was conducted in

the other two models. The Integrated model's fit indices were GFI = .961, AGFI = .940, CFI = .986, RMSEA = .037, BIC = 548.66, chi-square = 180.52, $df = 111$, $p < .01$. The Hierarchy model's fit indices were GFI = .943, AGFI = .916, CFI = .970, RMSEA = .052, BIC = 603.22, chi-square = 259.63, $df = 115$, $p < .01$. The Integrated model's fit index indicated better than the Hierarchy model's one. Therefore, we concluded that the Integration model provides the best explanation for the structure of attachment mental models in middle childhood.

Keywords: *attachment, mental models, middle childhood, attachment model structures*

The student behaviour survey: Psychometric properties in an Australian sample

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This study examined the psychometric properties of the Student Behaviour Survey (SBS; Lachar, Wingenfeld, Kline & Gruber, 2002), a 102-item teacher report measure of behavioural and emotional problems in children and adolescents. Participants were teachers of primary school children (ages 5 to 11 years) from a regular education ($n = 76$) and Child Adolescent Mental Health Service (CAMHS) ($n = 436$) setting. For the regular education group, teachers completed the SBS as part of risk study. For the clinically referred group, teachers completed the SBS at referral to the CAMHS service. The SBS was found to have good internal consistency for both the regular education and the clinical groups. Principal components analysis at the item and scale level yielded 3 components: Externalising difficulties, internalising difficulties and academic resources. Intercorrelations among subscales indicated adequate convergent and discriminant validity. For the regular education group, meaningful significant correlations were obtained between the SBS and the Strengths and Difficulties Scale (SDQ) teacher version demonstrating sound concurrent validity. The clinically referred group differed significantly from the regular education group on all SBS scales, with academic

achievement, learning habits, emotional and behavioural problems above the clinical cut-off. The results indicate that the SBS is a reliable and valid scale in the Australian context and is a useful tool for the identification of learning, emotional and behavioural problems among children.

Keywords: *student behaviour, behaviour problems, children, adolescence*

The study of leadership and new direction for developing entrepreneurs in Thai small and medium sized enterprises

CHONGVISAL, R. (Kasetsart University)

This research comprised of 2 phases. The first phase was designed to study the leadership of Thai small and medium-sized enterprises (SMEs) entrepreneurs and the second phase was to develop new leadership through training course. For the first phase, there were three sample sets. In the first sample set, the data were collected from 30 successful SMEs entrepreneurs by in-depth interview and critical incident technique (CIT). The data were analyzed to generate items of leadership scale for Thai SMEs entrepreneurs. The pilot 120-item leadership scale was tried out on the second sample set consisting of 544 SMEs entrepreneurs. Exploratory factor analysis (EFA) was used to explore the dimensions underlying the leadership scale. Confirmatory factor analysis (CFA) was used as a follow-up to determine the definite number of factors. Six factors resulting from CFA were 1) encouragement of subordinates' inspirational motivation, 2) consideration and well wishing toward others, 3) morality in business, 4) capability of strategic thinking, 5) encourage social consciousness, and 6) openness. The final 30-item leadership scale was validated with the third sample set composing of 1,064 SMEs entrepreneurs. The known-group technique was used to test the construct validity using the success of the entrepreneurs as the criterion. The results indicated that the leadership scores of all six factors from the highly successful SMEs entrepreneurs were statistically higher than the scores from the low successful SMEs

entrepreneurs. In the second phase, new direction for developing leadership of Thai SMEs entrepreneurs was proposed through the training course developed from Phase One. The Training Workshop for Developing SME Entrepreneurs' Leadership was developed and its quality assessed by the experts. There were three stages in the training course; assessment before training, leadership development by training, and evaluation after training. The course was organized into nine modules. After the training, two meetings were held to monitor and evaluate the progress of leadership development plan, to let them share their experiences with each other, to advise them on how to solve the problems during implementing, and to adapt their plan accordingly.

Keywords: *entrepreneurship, critical incident technique, leadership development, leadership training, strategic thinking*

The study of psycho-social problems of abused children in Iran, applied psychology preservative processors and some obstacles for prevention

RAHEB, G. (Welfare and Rehabilitation University), EGHLEMA, M. (Welfare and Rehabilitation University)

Child abuse is caused by various factors that create psycho-social problems for children and youth. Children are more vulnerable than others. Everything and every action that jeopardizes a child's psycho-physical health is child abuse. Any neglect or any action that puts them at risk physically and psychologically is called child abuse. In this study we would like to investigate psycho-social problems of abused children in the family and to recognize the role of psychologists in preventing this phenomenon and also in recognizing some obstacles, such as legislation, which they are facing in Iran. The method of study being used is case studies about children and youth that have been hurt by their parents. The sample is chosen from children being kept in rehabilitation centers or who have visited a clinic. The sample consists of 65 children and the measures are the MMPI, Raven's Progressive Matrices and Weschler's test, inquiries of the family's statues and psycho-statues. The results indicate that children are more vulnerable than

youth. The rate of physical, emotional, and sexual damages are higher. They live in a hard social, economic and familial situation. They suffer from emotional, behavioral, learning, social and personal problems. Psychologist activities with a social approach play a drastic role in preventing child abuse to occur in Iran. However, with this route, there are some challenges concerning cultural, legal and protective problems.

Keywords: *childhood abuse, children's vulnerabilities, familial abuse, child psychology*

The study on the behaviors of leaders which influence the trust of employees in the Chinese state-owned telecommunications enterprises

WANG, L. (Beijing Normal University), ZHANG, J. (China Telecom Company), CHEN, M. (Beijing Normal University), CHE, H. (Beijing Normal University)

This paper aims to explore which leader behaviors can influence the trust between a leader and subordinates as perceived by employees in the Chinese State-owned Telecommunications enterprises and to explore any differences by gender and job age. Five leaders and 12 subordinates by Behavioral Event Interview (BEI) method were interviewed. From the interview materials and the literature, a 65-item questionnaire was developed to measure the trust between a leader and subordinates. The questionnaire was tested on 221 participants, including 164 subordinates and 57 leaders. The questionnaire was revised to 50 items based on the data of the first test. After the second test with 220 participants, including 164 subordinates and 56 leaders, the questionnaire showed good reliability and validity. This study showed that the behaviors of leaders, which influence the trust in leadership, were accounted for in a six-factor model, arranged in descending order of importance as follows: ability, integrity and responsibility, job involvement, support and development, acceptance and cooperation, and openness and authority. There was no significant difference between male and female subordinates in the six factors. However, when the leader shows more job involvement, support and

development, acceptance and cooperation, and openness and authority, they can win greater trust of new employees than old ones. In conclusion, the study showed that 1) the behaviors of the leaders that can influence the trust between a leader and subordinates is a six-factor model; 2) the six factors have the same influence on the trust in the gender variable; and 3) there was a significant difference between different job ages in job involvement, support and development, acceptance and cooperation, and openness and authority, therefore we should take different measures to employees of different job ages.

Keywords: *leadership, trust*

The threat of negative stereotypes in interactions

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The aim of this research was to understand the manifestation of overt and covert forms of discrimination in customer service interactions. Using a customer service paradigm, we measured overt/blatant and covert/interpersonal forms of discrimination expressed by actual customer service agents toward (1) confederate shoppers as their natural average weight size or wearing obesity prostheses and (2) actual shoppers who varied in weight. Overall, the results revealed that when justifications for stereotypes were present in the interactions, actual obese shoppers and confederate obese shoppers faced more interpersonal discrimination than average-weight shoppers. Furthermore, there were negative bottom-line consequences of interpersonal discrimination for organizations (e.g. customer loyalty, purchasing behavior). Overall, this research shows the importance of examining subtle discrimination and offers a mechanism for theory-driven strategies for the reduction of covert forms of discrimination.

Keywords: *overt and covert interpersonal discrimination, customer service, discrimination, stereotypes, customer loyalty*

The three “r”s: Psychologists delivering services to regional, rural and remote areas in Australia

DE GRUCHY, D. (Centacare Family Services)

The aim of the study was to showcase what psychologists working in isolated geographic areas within Australia are doing to provide excellent psychological services within the constraints imposed by distance, isolation, multiple relationships, restriction of access to professional development and supervision, working with culturally and linguistically diverse groups, burn out and safety. Work in this area is influenced by costs – time, resources and money – and the lack of suitably qualified staff. Local Australian Psychological Society members wrote of their experiences of the above with a view to outlining the particular challenges and rewards of working within this area as well as the coping strategies they developed to tackle these difficulties. Recommendations are made as to what departments and organisations who service these areas can provide such isolated psychologists to enable them to cope effectively. Evaluation has been undertaken of the various strategies used. This is a constant work-in-progress as the turnover of staff hampers continuity of learning. Some of the strategies used to enable psychologist to work in this isolated region are: collaborative partnerships with other professional bodies, webstreaming, professional development sessions offered in video/DVD format followed by a teleconference, meetings via teleconference, sharing resources and personnel, and sharing the costs of staff, travel, professional development, and resources. Given the unique challenges and rewards of working within this region and the subsequent understandings and coping strategies developed, many psychologists continue to provide excellent psychological services and are willing to share the knowledge gained, and to support other such isolated psychologists to cope effectively.

Keywords: *working in rural and remote regions, psychological services*

The undoing effect of positive emotions on negative emotions in the situation of emotional labor

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The Broaden-and-Build theory of positive emotions deduces that positive emotions have an undoing effect on negative emotions, i.e. undoing the unusual physiological states invoked by negative emotions. Previous studies focused on the naturally felt positive emotions. While in the service industry, emotional labour requires the employee to display positive emotions to the customers or clients, no matter whether the employee is experiencing negative emotions. The positive emotions displayed are not naturally felt, but demanded by the organization. By exploring the undoing effect of positive emotions in such situation, the present study aims at further understanding of the emotion theory and the health-promoting functions of positive emotions in emotional labour. The 45 college students who participated in the laboratory experiment were randomly assigned to four groups. Group 1, 2, 3 were shown a film clip with sadness content, and then respectively asked to apply surface acting, deep acting, or trying no emotional efforts, to perform emotional labour, i.e. to show positive emotion by smiling. Group 4 was showed a film clip with neutral emotion content, and asked to try no emotional efforts. Two cardiovascular indicators, R-R interval and finger pulse amplitude (FPA), were recorded by polygraph throughout the experiment. The participant's emotional state was measured before and after the experiment. Results of the emotional state scales showed that the sad film invoked sadness, while the neutral film did not change the emotional state. For Group 3 and 4, the cardiovascular indicators showed that negative emotion actually invoked cardiovascular sequelae, while neutral film did not. For Group 1 and 2, cardiovascular sequelae were also elicited. The recovery of the cardiovascular activity from the abnormal states to the baseline in both two groups was faster than that in Group 3. No significant difference of the recovery time was found between Group 1 and 2. In the situation of emotional labour, those who feel or show positive emotions

recover from the cardiovascular sequelae faster than those who do not. The findings support the proposal that the Broaden-and-Build theory serves not only the naturally felt positive emotions, but also the intentionally felt and displayed positive emotions.

Keywords: positive emotion, negative emotion, emotional labour, invoked sadness, cardiovascular sequelae

The validation of the Gallup workplace audit in a South African petrochemical company

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Around 2002, the term “employee engagement” was used to describe a state of not only being satisfied with the job and workplace, but also giving one's best effort on a daily basis, and intending to stay (Branham, 2006). Using this definition, consulting firms such as Gallup, Hewitt and others developed employee engagement surveys to help companies measure what percentage of their workforces was truly enthusiastic, dedicated and committed – in other words, engaged. The aim of this research was to determine the validity and reliability of the Gallup Workplace Audit (GWA), as a measurement of work engagement in a South African petrochemical company. A cross-sectional survey research design was used. The Gallup Workplace Audit was administered among a convenience sample ($N = 2588$) of employees in a South African petrochemical company. Exploratory factor analysis resulted in four factors for the Gallup Workplace Audit. The factors were labeled clarity on required contribution, development opportunities, personal recognition and quality of relationships. All factors showed acceptable internal consistency. In conclusion, the GWA proved to be a valid and reliable measuring instrument of employee engagement. This confirms that an international survey can be utilised effectively to predict work engagement within in the South African work context.

Keywords: *work engagement, work context, engagement, Gallup Workplace Audit, relationship quality*

The validity of structured behavioral interviews for administrative jobs in China

LI, Y. (Tsinghua University), YU, Y. (Tsinghua University)

This study was conducted to determine the validity of structured behavioral interviews for making predictions of rating of job performance and potential. The validation sample consisted of 122 candidates. The correlations of potential and performance with structured behavioral interview scores were statistically significant and both predictor and criterion measures showed acceptable levels of reliability. The study also provides new evidence on the validity of structured behavioral interviews in administrative jobs in a large China public service organization. The discussion questions the extent to which structured behavioral interviews provide unique or overlapping predictive validity when compared with mental ability tests.

Keywords: *structured behavioral interviews, job performance, job potential, predictive ability, mental ability tests*

Three, four or five factors? The Occupational Stress Inventory-Revised, reviewed

HICKS, R. (Bond University)

The Occupational Stress Inventory-Revised is in common and growing use in occupational assessment. However, the inventory's most effective factor structure theoretically, and for practice, is unclear. This paper reports several studies indicating that four or five factors underlie the inventory, rather than three as indicated in the OSI manual. The OSI-R was administered to several groups of Australian employees and students over six different studies. More than 800 respondents in total were involved. Confirmatory factor analyses were conducted over three main groups

(examining whether the originally proposed three factor basis or instead, four or five factors, best explained the structure. Analyses to date have shown that a four-factor solution best fits the data, including the data given in the OSI-R manual. This current paper will report further confirmatory factor analyses on three new studies using more extensive samples of employees and students, to examine whether the three-, four- or a five-factor solution can be established. The results will help academics and professionals understand the nature of the OSI-R and its continuing value as a questionnaire linking occupational role stressors, psychological strain and available resources and skills of participants.

Keywords: *occupational stress, occupational assessment, confirmatory factor solution*

To think or not to think?: Effectiveness of reducing rumination in a Mindfulness Based Cognitive Therapy Group

HUSSAIN, Q. (Psylegal)

The principal aim of this study was to evaluate the effectiveness of a mindfulness based cognitive therapy group in reducing rumination, and the severity of symptoms of stress, anxiety and depression within a clinical population in a private practice setting. The method of evaluation involved pre and post testing of participants who had completed a structured six week group therapy course. The measures utilized were the Depression, Anxiety and Stress Scale (Lovibond & Lovibond, 1995) and the Ruminative Responses Scale (Nolen-Hoeksema, 1991). The results indicated that measures of rumination, stress, depression and anxiety reduced upon conclusion of the six week group therapy course. The conclusion was that mindfulness techniques applied and taught within a structured group context has reasonable effectiveness in reducing rumination and symptoms of depression, anxiety and stress. The implications for running these types of groups in private practice will be discussed.

Keywords: *rumination, mindfulness based cognitive therapy, group therapy, depression, anxiety and stress scale, group therapy*

Toward a conceptual and operational model of mindfulness in sport: A preliminary qualitative investigation

THIENOT, E. (University of Western Australia /Western Australian Institute of Sport)

In recent years, several conceptualisations of mindfulness have been formulated and tested in mainstream psychology. In the context of sport, mindfulness has also become a focus of interest in terms of promoting performance enhancement, but thus far it has not been conceptually validated. This investigation sought to identify the various perceptions that athletes were aware of during a competition. The study also examined cognitive reactions toward these perceptions to further explore mindfulness in sport. In stage 1, an open-ended questionnaire was completed by 95 athletes from two individual (i.e., swimming, cycling) and two team (i.e., soccer, water polo) sports. Immediately post-competition, participants were asked to report all the thoughts, feelings, and bodily sensations they were aware of (a) immediately before, (b) during, and (c) upon completion of performance. In stage 2, elite athletes from the same four sports were recruited to take part in an in-depth interview, during which they watched a video recording of themselves performing at a high-level competition (e.g., Olympic Games). Using principles associated with self-confrontation interviewing (von Cranach & Harré, 1982), participants were asked to (a) recall all the thoughts, feelings and bodily sensations they were aware of during the event, as well as (b) describe their responses to these perceptions. All data were analysed using inductive content analytic procedures to organize the raw data into interpretable and meaningful themes. Overall, results revealed two levels of analysis. The first level represents *what the athletes were aware of*. This level is linked to the nature (i.e., cognitions, emotional state, physical sensations) and the content (e.g., task-related, environment-related, self-related) of these perceptions, which are determined by the specificity of the sport-context. The second level represents *how the athletes reacted to these internal events from a cognitive point of view and a time-course perspective*. This level is illustrated by different cognitive processes that occur in response to the initial perceptions,

including processes of mindfulness and attention self-regulation (e.g., present-moment focus, awareness, non-elaborative thinking and acceptance towards internal perceptions, specific focus-strategy). These results can be used to develop an appropriate measurement tool of mindfulness in sport.

Keywords: *mindfulness, sport, performance, bodily sensations, focus strategy*

Training effectiveness and the use of the training group: An explorative study to investigate this bond

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SCARATTI, G. (Catholic University of Milan)

The social-productive background is changing (Hatch, 1997; Bauman, 2002) and training and training evaluation are changing as well (Lipari, 2002); they have to deal with even more complex issues and consequently there was a significant evolution in training approach during last few decades. This study arises from an interest to investigate the bond between training effectiveness (Tannenbaum & Yukl; Alvarez et al. 2004) and the use of the training group, proposed with a specific approach (Kaneklin, 1993). Differently from classic literature about training effectiveness, we have adopted this construct to explore a training-path conducted with a psychosociological approach, based on 1) Participative learning (Levy, 2005); 2) Learning focusing on problems and sharing experiences, doing research together on specific objects to support a developing professional identity (Kaneklin & Olivetti Manoukian, 1990; Bion, 1975). This paper presents a training-research program planned by Catholic University (Milan) to approach and support the coaches' professional identity. Forty youth sector coaches were involved in this year-long educational program. The formative aims were about reflecting together about coaches' role, experience, efforts and, capabilities. During the program we have proposed different kinds of groups: steady groups (composed of 12 coaches; conducted by an expert trainer and a tutor), small group and plenary moments; they were integrated with individual/groups activities (for example role-playing and theoretical lessons).

The study aims to explore if and how the steady group evolves and how it can support the generation of training outcomes. A qualitative method was used. The content analysis was conducted on specific training moments (five sessions; transcription of 14 hours of training), both on the group dimension and in the trainer function and intervention. The content analysis was conducted with the support of the software ATLAS.ti. The data analysis allowed elaboration of useful indicators (both for group and trainer) to understand the evolution process of the training groups. This study provides an interesting contribution to the understanding of training effectiveness in this training approach and causes new interesting research questions to arise.

Keywords: *training evaluation, professional identity, trainer function, trainer intervention*

Training empathy: A review and meta-analysis of empirical studies

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In counselling and psychotherapy, the concept of empathy is widely regarded as one if not the most important qualities of effective therapists. However, the possibility to develop empathic abilities in training programs is also highly relevant outside therapy and has led to a substantial number of studies measuring the effectiveness of empathy training. This meta-analytic study aims at evaluating how effective training in empathy is. Based on a comprehensive literature review and relevant literature databases (PsycArticles, PsycInfo, SocIndex, ERIC, Medline, CINAHL), this contribution presents results of a meta-analysis of over 100 controlled studies on the effectiveness of empathy training programs. Only studies fulfilling high scientific criteria were included and comprehensively coded. Studies on empathy training were conducted with such diverse groups as students, health professionals, school and preschool children, couples, parents, older persons, and persons in the forensic field. The meta-analysis shows that empathy training has a stable and medium-size effect on increasing empathy of participants. We analyze

and discuss possible influences on the effectiveness of empathy trainings. Limitations of these trainings are discussed which future practitioners and researchers of empathy trainings should consider.

Keywords: *empathy, counselling skills, counselling practitioners, counselling training*

Training of future orientation in educational field at late adolescence

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The aim of this research was to look at the effect of training on the condition of future orientation in educational field on adolescents who were in the third grade of senior high school. This research is categorized as field experimental; the research occurred in a real condition (reality) by manipulating one or more independent variables in as highly controlled condition as possible for the situation (Kerlinger, 1986). The design that was used in this research is a true experimental design which executed a pretest-posttest control group design (Campbell & Stanley, 1966). There are two statistic tests that were used in this research, the U Mann-Whitney test and Wilcoxon test. In this research, Purposive Sampling test was used to attain the research's subjects. Results of the research show that there is no difference in improvement of condition of future orientation between participants and non-participants of the training, whereas statistic tests from each sub-dimensions show that there is a difference of conditions between participants and non-participants of the training. Those sub-dimensions are plan, internality, probability, and emotion. The results from questionnaire show that there are changes that happened to the participants and those were in cognitive and affective aspects. Training of future orientation has an effect in qualities of the participant's future orientation. In cognitive aspect, learning level from participants was at least achieved to the application level, where they understood and implemented that understanding into a concrete problem. In the affective aspect, the participants achieved at least a responding learning level or even organization level; they started to show new behaviours as a result from experiential learning,

and simultaneously integrate those new values into their own values.

Keywords: *future orientation, experiential learning, training*

Training with attitude: The effect of affect

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In our preoccupation with training design and the conditions necessary for effective transfer of training the role of trainees' attitudes and emotions may have been somewhat overlooked. Recent reviews of research on training and transfer call for a greater understanding of the role of affect in training effectiveness. This study aims to assess the relationship between training outcomes and affect and attitudes. All trainees participating in the study were administrators attending courses designed to build skills that personal assistants and executive assistants require. The training concerns communication, problem solving and relationship building and attempts to shift attitudes towards a more accountable and proactive approach to work. Measures were taken one week prior to training and three weeks after training of trainees RBSE and self reported performance. Trainees completed assessments of their proactivity, control appraisal and change orientation, LMX and engagement, prior to and following training. They also completed open ended questions on the changes achieved through training. Regression analyses and thematic analysis indicate that training serves to modify affect and attitudes and that affect moderates the impact of training on self reported performance. This is the first in a series of studies proposed by the authors and the opportunity will be taken to discuss the next steps in the programme of work.

Keywords: *training, training, training, attitudes, self reported performance*

Trait anxiety and risk decision-making: What are influencing factors?

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This study intends to explore the relationship between anxiety and risk decision-making, in order to provide clinical therapy guidance for anxiety and offer some practical advice for risk decision. Questionnaires and experiments are used to investigate 458 undergraduates (296 for revising a questionnaire, 162 for the revised questionnaire study). The Revised Anxiety Control Questionnaire and Optimism Scale have good psychometric attributes. Controlling depressed mood, we have observed a negative relationship between trait anxiety and risk decision-making. Some factors, such as gender and major field of study, have a significant interaction with trait anxiety on risk decision. Perceived control of anxiety and generalized self-efficacy may mediate the relationship between trait anxiety and risk decision. This study shows the relationship between trait anxiety and risk decision-making is negative. Some factors such as gender, major, perceived control of anxiety and generalized self-efficacy influence the relationship.

Keywords: *anxiety, risk decision-making, revised anxiety control questionnaire, optimism, self-efficacy*

Transformational dance: The dark side of transformational leadership in professional dance companies

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The purpose of this study is to investigate the relationship between leadership characteristics and injuries in professional dance companies. This paper proposes that transformational leadership characteristics of the choreographer would impact the level of affect-based trust, and the number and severity of injuries. It is also hypothesized that an increase in the presence of affect-based trust would increase the number and severity of injuries. Professional dance companies in Montreal were contacted for participation. Sixteen dancers from four companies completed questionnaires that incorporate the Multifactor Leadership

Questionnaire (MLQ), affective and cognitive trust, and questions regarding the number and severity of the injuries they have sustained. In addition to the quantitative analysis, interviews were sought with two dancers from each dance company to get a more in-depth look at the potential causes of injuries and the impact that the injuries have on the dancers' careers and perspectives towards the dance company and the choreographer. The results demonstrate that the presence of transformational leadership characteristics in choreographers correlates to the development of affect-based trust and the number of new injuries sustained. Idealized Influence (0.825, $p = 0.000$) and Individual Consideration (0.841, $p = 0.000$) were most strongly connected to affect-based trust with Inspirational Motivation (0.586, $p = 0.022$) and Idealized Influence (0.576, $p = 0.025$) most strongly correlated to new injuries. Affect-based trust, in turn, showed significant correlations to new injuries (0.554, $p = 0.032$), in particular for injuries that are mild in severity. Dancers work in pain, on average, over a third of the time ($M = 35\%$). This does not seem to be affected by the leadership qualities of the choreographers or by the levels of trust developed between individuals. As brought out in the interviews, this is simply the way it is. However, this does not mean that the leadership qualities of the choreographers do not impact the health of the dancers. This study demonstrates, contrary to the results found in other industries, that when leaders are more transformational, higher levels of affect-based trust are developed and new injuries increase. Awareness of this relationship between leadership, trust and injuries could provide opportunities to reduce new injuries in high performance athletes such as professional dancers.

Keywords: *dance, transformational leadership, affect-based trust, injury, leadership*

Transiting to college in Hong Kong: Effect of personal attribution, expectation, academic adjustment and discrepancy of expectation-outcome on college Freshmen's psychological well-being

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College transition is a developmental milestone, and also one of the most stressful events in our lives. The present study aimed at studying the transition process. To examine the underlying factors that may be facilitative of a positive transition, the effects of expectation on adjustment, personal control, perceived adjustment and discrepancy of expectation-outcome on freshmen's well being were examined in the present study. One hundred and sixty two first year undergraduate students completed self-reported questionnaires twice over the course of their first semester in college. The questionnaire assessed their expectation and controllable attribution in the beginning of the school year, and their perceived adjustment and psychological distress at the beginning of the second semester. Discrepancy between expectation and academic adjustment positively predicted freshmen's psychological distress. The association between expectation and psychological distress was mediated by perceived adjustment, while the relationship between controllable attribution and perceived adjustment was mediated by expectation. Motivation was not significantly related to academic adjustment. Relative to the social cognitive factors measured in the present study, expectation is the most predictive of academic adjustment and subsequent distress among college freshmen. The intervention could aim at helping freshman to set high but realistic expectations for academic adjustment, which can serve as their goal to pursue in the transition to college.

Keywords: *college transition, positive transition, adjustment, perceived control, academic expectations*

Transition to university: Development and validation of a questionnaire on the types of the student experience

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The issue of adaptation to university entrance is the subject of a considerable number of works in the humanities, including psychology. One issue concerns the number and nature of disruptive or facilitative dimensions of this adjustment (see

the questionnaires of Syrik & Baker, 1999 and of Wintre and his colleagues, 2008, 2009). The purpose of this communication is to present a questionnaire whose originality is to translate into psychological concepts the proposal of the sociologist Dubet (1994) that three dimensions are fundamental to predict academic success: the project, integration, and vocation (1994). Participants were 867 high school students who responded to the questionnaire during a visit to the university (576 girls and 288 boys, mean age 17 years). The proposed questionnaire includes 43 items based on models and tools within each field: 15 on project (e.g., "I have a clear idea of the job I want to do"), 17 to integration (e.g., "I get easily make friends") and 11 for the vocation (e.g., "My studies helped me to better understand the world in which I live"). Each dimension is divided into sub-dimensions (e.g., the project is divided into decision-indecision, need achievement, locus of control, and time perspective). Sensitivity of each item was tested, leading to the deletion of half of them (social desirability bias). Factor analysis (principal components, varimax rotation) of the 22 remaining items reveals three factors explaining about 30 per cent of the variance: school effectiveness, professional project, and perceived competence and self-confidence. The reliabilities (Cronbach's alpha) are good. These three factors are correlated with values between .13 and .37. The dimensions found are consistent with Dubet's model (1994), with the model of Syrik and Baker (1999) and with the broader model of Wintre and Bowers (2007). The prolongation of this research is to test predictive validity of our tool, and we'll present preliminary results obtained from 274 students interviewed at entry into first year university whose results for final examinations session are known.

Keywords: *adaptation, factor analysis, university*

Trialing a medium-term group for men who have sex with men (MSM) at risk of HIV transmission: What content and process factors facilitate engagement, development and change?

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During the past ten to fifteen years, meta-analyses have reported the effectiveness of group interventions for MSM engaging in HIV-risk behaviour (unprotected anal intercourse with multiple partners). However, most studies have not reported intervention detail and the theoretical or evidence base for them, or reported process data. This study aimed to trial a medium-term group informed by Dialectical Behaviour Therapy (DBT, Linehan, 1994) and psychodynamic group process theory, for which outcome and process data were collected. Participants were MSM attending a specialist, sexual risk-reduction clinic because of their sexual risk behaviour. A medium-term group was delivered incorporating skills-training (Mindfulness, Distress Tolerance, Emotion Regulation, Interpersonal Effectiveness) and reflective components, led by male and female Clinical Psychologists. Participants completed a demographic/sexual health/sexual behaviour questionnaire, the Personality Assessment Inventory (PAI, Morey, 2007), the Sexual Compulsivity Scale (SCS, Kalichman & Rompa, 1995) and the Sexual Sensation Seeking Scale (SSSS, Kalichman & Rompa, 1995) at Intake, conclusion and three months. Process data was also collected from participants and facilitators. Outcome data from the group were compared with data from MSM participating in individual therapy. Preliminary data suggested the group intervention was associated with either a decrease or no increase in sexual risk behaviour, general psychopathology and psychosexual symptoms. Process data indicated that participants found both the skills-training and reflective components valuable, with each contributing differently to therapeutic outcomes. Consistent with international data, this group intervention was associated with a decrease or no increase in sexual risk behaviour and associated psychological difficulties among local MSM. Different benefits emerged from the skills-training compared with the reflective group components, suggesting that in this population, maximum therapeutic benefits may derive when attention is paid to both. Some Clinical and Applied Research implications of this work will be discussed.

Keywords: *sexual risk behaviour, HIV, dialectical behaviour therapy, sexual sensation seeking scale, group intervention*

Tripartite model of depression and anxiety and its association with temperament and character

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In recent decades, the Temperament and Character conceptualisation of personality by Cloninger (Svrakic & Cloninger, 2005) has been important role in the explanation of many aspects of individual differences. The present study was carried out to investigate the association of personality factors with basic components of a tripartite model of depression and anxiety including Negative Affect (NA), Positive Affect (PA), and Physiological Hyper Arousal (PHA). In this cross-sectional, descriptive, and correlational study, a sample of 295 undergraduate students (219 girls and 76 boys) from the University of Social Welfare and Rehabilitation Sciences were asked to complete the Temperament and Character Inventory (TCI-125), Positive and Negative Affect Scales (PANAS), Physiological Hyper Arousal from the Inventory of Depression Anxiety Symptoms (IDAS), the Beck Depression Inventory (BDI-II), and the Beck Anxiety Inventory (BAI). Data were analysed using Pearson's correlation, and multiple regression statistical methods. Findings showed moderate and positive correlations between Temperament (Novelty Seeking, Harm Avoidance) and Negative Affect ($p < .01$), but slightly high and negative correlations between Character (Self-directedness, Cooperativeness) and Negative Affect ($p < .01$). Also, Temperament and Character can predict a meaningful amount of tripartite model components (NA= 43%, PA= 32, & PHA= 20%). These primary findings confirm that Temperament and Character are relevant personality factors that should be enrolled in the dimensional modeling of emotional disorders.

Keywords: *depression, anxiety, temperament, character, tripartite model*

Truckies as designers: How truck drivers complete design in use

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The aim of this paper is to improve the design of vehicles by taking account of the process through which truck drivers engage in adaptation. A longitudinal comparative evaluation of trucks was undertaken to support an acquisition decision. Fourteen drivers travelled more than 5000 kilometres in each of six different models of trucks. They performed a variety of structured driving tasks on bitumen, dirt and off road. Over a period of 11 weeks the drivers provided their views on the different trucks via surveys, interviews and group discussions, including comparisons with trucks currently in service. Drivers were asked about their views on vehicle ergonomics and performance, as well as any adaptations they had made to vehicles currently in service. Drivers evaluated vehicles poorly when they failed to meet their needs with respect to comfort, usability, and functionality. When given the opportunity, they also made choices to adapt the vehicles to more closely meet their needs. Drivers reported a range of adaptations that can be classified into three types: personalisations, customisations and aberrations. Personalisations involve adjustments to the vehicle related to aesthetics or presentation, such as bumper stickers. Customisations involve the incorporation of additional functionality, such as a Global Positioning System, curtains, and fridges. Aberrations entail employing the vehicle in ways that diverge from the designers' intentions, such as changing gears without using the clutch. Customisations and aberrations have substantial implications for future design. For example, one of the vehicles had recently incorporated a power supply. However, drivers of an earlier version without a cabin power supply drew power directly from the battery to run music players. The power supply was incorporated to specifically prevent such practices. The role of technology users in completing design has frequently been overlooked. This paper draws out the implications of understanding such adaptations for improving the design of vehicles.

Keywords: *vehicle design, truck driver adaptation, vehicle, customisation of a vehicle, technology use*

Two case studies of accidents in a large Japanese manufacturing company

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The purpose of this study is to investigate latent conditions which could cause accidents. According to Reason's the 'Swiss Cheese' Model (1997), organizations include many defensive layers to ensure that accidents do not occur, but each layer often has flaws, or 'holes'. Usually the 'holes' in each layer cancel one another out, but there are some situations in which the holes may line up and a danger is allowed to become an accident by passing through corresponding holes in the layers of defense, barriers and safeguards. The holes can be created by active failure and latent conditions. The former includes errors and violations committed in the front line; for example control room operators, maintenance personnel and the like. Such unsafe acts are likely to have a direct impact on the safety of the system (Reason, 1997). The latter, on the other hand, are spawned in the upper echelons of the organization and within related manufacturing, contracting, regulatory and governmental agencies (Reason, 1997). Active failures usually have immediate effects, whereas latent conditions often defeat the system's defenses over a long period of time. In this paper, I especially focused on the latent conditions created by the 'holes' which could cause accidents and researched those conditions by dealing with two case studies of accidents caused in a large Japanese manufacturing company. Case study 1: Glass tubes for TV's were being manufactured on an assembly line. When a blockage occurs, workers have to remove the glass tubes from the line using a long tool. However, one worker removed them by hand, because the tool was not in its proper place. It was a clear violation of the rules. When the person had just removed the tubes, a coworker came over to help him and had an accident in which his hand was cut by a passing tube on the line. Case study 2: A worker was assigned to clean up glass shards with a shovel and place them in a box. A nearby hole had been left uncovered, so a line leader roped off the dangerous area to keep others out. However, the shovel had been left within the roped-off area. The worker ignored the safety rope in order to get his shovel but tripped on a cord

near the rope and fell over. This worker suffered a broken hand. The accident could have been far more serious if the worker had tripped and fallen into the uncovered hole, which has a drop of six meters. Semi-structured interviews were conducted between August and September 2009. The interviews were held in a meeting room in the company and consisted of two people: the author and the interviewee. The interview time was approximately 80 minutes for both case study 1 and case study 2. The interviews were recorded. Case study 1 was conducted on the basis of interviews with ten people: the victim, a coworker, a maintenance worker, the line leader, a manager, the section chief, a safety officer and three executives. Case study 2 was conducted on the basis of interviews with twelve people: the victim, the victim's supervisor, a coworker, two line leaders, two managers, the section chief, a safety officer and three executives. Interview questions included Question 1, "Tell me exactly how the accident occurred." and Question 2, "Why do you think the accident occurred?" Interview data was transcribed and divided into categories using KJ method which was developed by a Japanese ethnologist, Jiro Kawakita. The answers to both question 1 and question 2 were very similar, therefore they were analyzed together. The analysis was conducted by the author and three post graduate students. Case study 1: First I identified four categories for reasons of violation as active failures caused the accident: category 1) "Workers wanted to go home early by finishing their work as soon as possible"; category 2) "Workers found it troublesome to work by the rules"; category 3) "Workers believed a loss of time is incurred when working by the rules"; and category 4) "There have been situations in which the majority of workers have ignored the rules". Secondly, I found latent conditions which are connected to each of the aforementioned categories: for example "The leader and the manager didn't consider the psychological impact of working on a holiday; employees who had completed their duties gradually left work early"; "The safety at the plant depends too much on individuals being careful to avoid accidents"; "Managers, supervisors and maintenance staff didn't provide sufficient explanations and training about rules with plant workers"; "Managers did not go to the factory, therefore they could not

comprehend the problem and take appropriate measures"; and "Even though workers try to follow safety procedures and tackle safety matters, it is not reflected in their evaluations. Therefore they tend to prioritize productivity over safety". Case study 2: First I identified nine categories as latent conditions and then those categories were grouped into four larger categories: category 1) "The line leader didn't manage the situation effectively"; category 2) "The rope was not appropriate as a safety measure for the uncovered hole"; category 3) "Safety measures had yet to be devised for the uncovered hole which people had realized as dangerous"; and category 4) "In the process of building the factory and facilities, insufficient care was taken with regards to safety". The results support the view that managers and leaders should seek the opinion of the front line and that they should explain rules and regulations sufficiently to their employees. They need to have better communication with the workers.

Keywords: work accidents, accident safeguards, unsafe acts, organisational safety, front-line workers

Typical human errors in traffic accidents involving powered two-wheelers

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Powered two-wheelers (PTW) constitute an increasingly popular form of travel, corresponding to the actual needs and problems of mobility. At the same time, the risk of being killed on a PTW is around 20 times higher per kilometre than in a car, and none of the measures adopted in recent years have managed to bring these rates down significantly. This suggests a more in-depth understanding of the mechanisms behind these accidents and the variables acting on their production is needed. The present study is based on detailed analysis of 384 traffic accidents involving a PTW, which are compared to 1174 other accident configurations. The data were collected on the scene by multidisciplinary teams and covered three components of the road system: drivers, vehicles and infrastructure. Each accident surveyed gave rise to an analytical case analysis, including a reconstruction in time and space of

the events leading up to it, designed to corroborate the information gathered. They also gave rise to a cognitive analysis of the "human errors" to which PTW riders and other road users were subject to. Human functional failures of PTW riders differ from those of other road users, demonstrating that certain difficulties are particular to them. Thus, riders tend to commit more errors in prognosis (26.1 % versus 17.1 %), i.e. they are more frequently confronted with situations in which their foresight fails them given the way the situation they encounter actually develops. They also commit more errors in making decisions to undertake certain manoeuvres (11.2% versus 7.3%), notably overtaking, at a time and under conditions where these manoeuvres cannot be undertaken without a certain amount of risk-taking. Lastly, they encounter more failures related to vehicle control (16.3 % versus 12.3 %), notably when they are confronted with difficulties related to the layout of the road or to various external disturbances. The principal explanatory elements for all of these failures are, for endogenous variables, a lack of experience, the choice of an excessive speed and adopting a risky driving style. For exogenous variables, they are most often an atypical, unexpected manoeuvre by another user and infrastructure difficulties. Another important result shows that car drivers involved in an accident with a PTW are not subject to the same patterns of errors as car drivers involved in other types of accidents. They notably have dramatically more perceptive failures (59.9% versus 45.0%) than others. Such a result demonstrates the radical nature of the problem of PTW conspicuity. An accident is a complex process that cannot be summed up by the intervention of a single factor. To achieve operational results, their analysis should not be limited to identifying those "responsible", but rather should take into account the participation of all actors, which would help in finding solutions for each of them. The results provided are in keeping with the accident research that has marked the major steps in our understanding of motorised two-wheeler insecurity (Hurt et al., 1981; MAIDS, 2004) and, in some ways, constitutes an update by going further into the understanding of the cognitive aspects involved.

Keywords: *traffic psychology, accident reconstruction, powered two-wheelers, risky driving, human driving errors*

Ultimatum game – economic or pro-social behaviour among young people from a developmental perspective

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The study (supported by Special Grant No. ESF/84/2006) focused on decision-making in the Ultimatum Game. Assuming that these actions can have different underlying mechanisms (economic competition, empathy, reciprocal or inherited altruism, unconditional fairness) the game was carried out in three conditions – “face to face”, in a distance with similar or less similar partner (from the same or other country) – and in three age groups (11, 14, 17). The aim was to examine: (1) if frequency of individualistic, equal and altruistic offers depends on game conditions and age; and (2) whether cooperative behaviour depends on partner’s offer, game conditions and age. Participants were 2046 students at age 11 (682), 14 (708) and 17 (656) from Poland, Spain and the UK. The offered proportion of money was the index of types of offers: 50 percent – equal, above 50 percent – altruistic, and below 50 percent – individualistic. A decision on a given proposal was the index of cooperative behaviour. In all groups equal offers occurred the most often. However, frequency of specific offers depended on game conditions generally and in each age group. In all groups altruistic offers were manifested less often in the “face to face” than distance conditions. Students aged 11 manifested individualistic offers more often, but students aged 14 and 17 manifested equal offers more often in the “face to face” than in distance conditions, and individualistic offers most often towards a distant similar partner. Age influenced frequency of specific offers in each condition and the older students presented the following offers more often; equal offers in the “face to face” condition, individualistic offers towards distant similar partner, and altruistic offers towards a less similar partner. As regards cooperative behavior, important factors were partner’s offers (equal facilitated it), game conditions (“face to face” enhanced it), and

interaction between them. In general, cooperative behaviour and frequency of specific offers did not depend on age of students. Cooperative behaviour was limited by individualistic offers of similar partner or altruistic offers of less similar partner. Age enhanced manifesting specific offers dependent on context - crucial transition occurred between 11-year-old and 14-year-old students, when abstract thinking is developed intensely.

Keywords: *decision making, altruism, individualistic, prosocial behaviour, development*

Uncontrollability and danger: Toward a common metacognitive component within the emotional disorders

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Most of the emotional disorders had been correlated with metacognitive beliefs (e.g. see Spada, Mohiyeddini, & Wells, 2008) and it seems that some aspects of metacognition at least have a nonspecific role in emotional disorders. In the present study, we aimed to determine the role of metacognitive factors within the symptomatology of depression and anxiety. A sample of 295 undergraduate students (219 girls and 76 boys) from the University of Social Welfare and Rehabilitation Sciences were asked to complete the Metacognitions Questionnaire (MCQ-30), Positive and Negative Affect Scales (PANAS), Physiological Hyper Arousal from the Inventory of Depression Anxiety Symptoms (IDAS), Beck Depression Inventory (BDI-II), and Beck Anxiety Inventory (BAI). Data were analysed using Pearson's correlation, and multiple regression statistical methods. Results showed that four metacognitive factors (positive beliefs, uncontrollability and danger, cognitive confidence, and need to control thoughts) were positively associated with negative affect, Physiological hyper arousal, anxiety and depression ($p < .01$); however the fifth factor of metacognition (cognitive self-consciousness) was positively correlated with positive affect ($p < .01$). Surprisingly, the second factor of metacognition (uncontrollability and danger)

predicted noteworthy amount of other variable's variance, alone (from 24 to 37%). These findings can be primary evidence for the role of metacognitive factors in the recent dimensional modeling of depression and anxiety beyond the influence of affective conceptualisations.

Keywords: uncontrollability, anger, emotional disorders, meta-cognition

Understanding environmental conscience: The benefits of conducting preliminary research by consulting an expert panel and industry liaisons

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In order to achieve meaningful reductions in our ecological footprints, individual citizens will need to dramatically alter their energy consumption and day-to-day habits. Any interventions will need to be evidence based and there will need to be a rapid transfer or communication of information from the point of research, into practice. This research utilises and builds upon the theory of planned behaviour to explore the predictors of environmentally friendly behaviour. In order to ensure that the purpose of the research and the constructs measured would be as theoretically driven and practice relevant as possible, an expert panel and a number of industry and council liaisons were consulted. This is a cross-discipline project, using methods from psychology and public health. Following a qualitative pilot study, we constructed a self-administered mail survey which was distributed to a random sample of 3000 residents of Brisbane and Moreton Bay during October 2009, with follow up continuing until January 2010. An important aspect of the design involved seeking feedback from an expert panel, in relation to the application of theory and real-world relevance of the constructs under investigation. Further, a number of industry and government experts were consulted in order to ensure the relevance of the topics under investigation and to forge pathways for future real world applications. Thus far we have achieved a response rate of 40 per cent ($N = 1175$) for the initial survey. As a result of the contact with industry and academic experts, we were able to gain additional funding for the

research and forge alliances with a number of state and local government representatives who are keen to apply the findings of this research in real world applications. Taking a multi-disciplinary approach to research can have multiple benefits: improving the quality of research, lending credibility to research methods, disseminating knowledge, identifying industry partners and identifying pathways through which research can be translated into practice. It is anticipated that, as a result of this study, a number of important predictors of environmentally friendly behaviour will be identified, including underlying beliefs that can be targeted in interventions. At least three local councils have expressed an interest in making use of the results of this study as part of their community engagement programs.

Keywords: theory of planned behaviour, environmentally friendly behaviour, ecological footprints

Understanding mental toughness in Australian tennis

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As the first known study of mental toughness in tennis, this study's aims were to gain a fuller understanding of mental toughness and, specifically, what mental toughness means to tennis players and how it can be developed, maintained, lost and taught. Eighteen (ten female and eight male) recently retired top world-ranked Australian professional tennis players responded to a questionnaire that was developed to address future directions of mental toughness research proposed by Jones, Hanton and Connaughton (2007). A series of inductive content analyses was conducted to analyse the qualitative data obtained from participants' responses. These analyses revealed that mental toughness is a most sought-after dynamic attribute that encompasses a range of abilities (e.g. focus, work ethic) to consistently perform well under pressure. Further, mental toughness is thought to be 'taught' and/or 'acquired' over many years and can be influenced by factors that include injury, changes in a player's technique, and match results. Examples of mentally tough players were cited (e.g. Monica Seles, Maria Sharipova) and reasons given as to

their selection as outstanding mentally tough competitors. Sport psychologists were identified as significant members of a support team (that also frequently includes a coach, mentor and/or fitness trainer) to guide and equip players to be mentally tough competitors. Indeed, sport psychologists were deemed as vital sources for instilling key values such as perseverance, passion, fun, fair play, giving one's best and tenacity. In conclusion, this study's value to the tennis community includes both theoretical and practical benefits from gaining a fuller understanding of what is arguably one of the most important psychological skills in achieving excellence and enjoyment in tennis - mental toughness.

Keywords: mental toughness, professional tennis players, sports psychology, working well under pressure, support

Understanding the outcomes of HRM hybridity in a developing country context: The case of Turkey

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The present study exploratorily investigated the local employees' perceptions of appropriate and effective HRM practices at the cross cultural interfaces. The transferability of HRM practices evolved in the industrialized Western cultural context to the developing countries has been questioned very recently (e.g. Aycan et al., 2000). Furthermore, for HRM managers in MNCs operating in these countries, the challenging task of balancing the incompatible demands of being locally responsive (localization) while preserving global integration (globalization) (Horwitz et al., 2002) eventually leads to adoption of hybrid models. Not only the hybridization of HRM but also its outcomes, in terms of their perceived appropriateness and effectiveness, are missing in the literature. Data were collected via self-administered questionnaire from employees working in MNCs in Turkey (n=150). While the appropriateness is conceptualized as the perceived ethicality of that practice, effectiveness is conceptualized in terms of employees' satisfaction with HRM as well as perceived effectiveness. Questionnaires also included the measures of socio-cultural value dimensions, preferred and actual HRM

practices, hybridity of HRM, organizational commitment, turnover intention, and demographics. Data analyses involved scale validation and model testing via structural equation modeling (SEM). Results revealed that employees who are high on fatalism and power distant values preferred more hierarchy-oriented; those who are high on collectivism preferred more group-oriented and those who are high on performance orientation, fatalism and power distant values preferred more formal HRM practices. Furthermore, as an HRM practice was perceived to be more hybrid, it was also perceived as more appropriate (i.e. ethical) and effective. In addition, an exploratory model asserting the mediated relationship between HRM and employee attitudes was tested through SEM. Results revealed that as the discrepancy between preferred and actual HRM decreases, it was perceived more appropriate and effective, which, in turn, lead to higher organizational commitment and lower turnover intention. This study is expected to contribute to the literature by examining perceived outcomes of so-called 'Western' cultural influences in the context of HRM in developing countries. It is also expected to contribute practice by providing feedback to HRM practitioners, especially in MNCs, about how to implement HRM in particular cultural contexts to increase their appropriateness and effectiveness. Theoretical and practical contributions of the present study will further be presented.

Keywords: human resources, turkey, employee attitudes, cultural factors

Understanding the processes of intergroup contact and the intercultural sensitivity of university students living in culturally diverse residences

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Increasing trends in student participation in international courses and study abroad programs have enabled culturally diverse groups of young people to meet and interact. These interactions demonstrate an increasing need to examine the dynamics of student intercultural contact within a multicultural environment. While empirical research has examined the

required conditions for optimal contact between different cultural groups, there is little evidence identifying the underlying processes that determine the outcomes of intercultural contact. The naturalistic observation compared two residential colleges of differing levels of cultural diversity and intercultural contact; a highly cultural diverse residence encouraging intergroup contact and intercultural learning, with a comparatively lower diversity residence emphasising Australian values. The aim was to observe differences in intercultural sensitivity and to gain an insight into the experiences of Australian and international students living in a multicultural environment. Employing a mixed-methods design, 241 university student residents completed questionnaires 16 participated in interviews. The residents completed the Intercultural Sensitivity Scale, an adapted version of the Developmental Model of Intercultural Sensitivity, and were asked about the frequency of their intercultural contact. Students living in the high diversity residence reported more intercultural contact than those at the low diversity residence; the Australian students at the high diversity residence scored higher than Australian students at the low diversity residence on measures of intercultural sensitivity. International students reported more frequent intercultural interaction than Australian students. Females scored higher than males on intercultural sensitivity factors including respect for cultural differences and interaction attentiveness. An unanticipated finding revealed that students living in the lower diversity residence for less than 12 months had higher intercultural sensitivity than those that had lived there for 12 months or longer. Qualitative data revealed five main issues pertaining to the underlying processes of student intercultural interactions. These were an initial reluctance toward intercultural contact, opportunity for intercultural interaction, learning about other cultures, stereotypes, and perspective-taking. Quantitative results demonstrate that increased frequency and intensity of intercultural contact lead to higher levels of intercultural sensitivity. In addition, the themes derived from the qualitative analyses form the basis for understanding student experiences within multicultural residences.

Keywords: *intercultural contact, intercultural sensitivity, cultural diversity*

Unequal perceptions of large-scale organizational change

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The aim of this paper is to present some characteristics associated with the way individuals perceive organizational changes. It is assumed that some individuals have a greater ability to articulate the causes and consequences of events that take place in an organization, even if they don't directly affect their departments and activities. However, other individuals have a narrower view of macro-organizational aspects and events and only perceive change when it directly affects their work routine. It is proposed that education level, nature of the position and rank are aspects associated with the unequal perceptions of organizational change. Data were collected from 564 employees of three organizations facing strong institutional and market pressures and undergoing large-scale changes. A five point Likert scale (52 items) was developed and validated to collect data. Analysis of variance and the relationship between Mahalanobis distance and frequency distribution were used to analyze data. The results show that respondents with lower levels of education tend to be identified as outliers by the Mahalanobis distance technique. To the extent that the education level increases, respondents show a response pattern more congruent with the reality experienced by the companies. This trend remains constant regardless of the significance level ($p < 0.05$; $p < 0.01$ and $p < 0.001$). This result was confirmed by the analysis of variance $F(29,4)$, $p < 0.000$. The analysis of variance also showed that employees that perform operational activities with no leading position tend to be identified as an outlier. On the contrary, employees that perform tactic or strategic oriented activities tend to respond according to the built pattern $F(14,0)$, $p < 0.000$. The organizational change process evaluation methods and program appraisal techniques must consider that individuals perceive large-scale organizational change in a different manner, so as to produce valid data and results.

It is also assumed that to access the prevailing conceptions of what the organization is supposed to do, how it is supposed to do and how it should be judged, it is important the precise identification of the contributions of organizational groups in sharing different ideas, beliefs and values.

Keywords: *organisational change, organizational rank, change perception, program evaluation*

University place-identity, satisfaction with perceived social support and homesickness: A mediated model of homesickness in first year university students from rural backgrounds

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The aim of the present study was to investigate university place-identity as a mediator of the relationship between satisfaction with perceived social support and homesickness in first-year university students engaged in a rural-to-urban relocation. One hundred and sixty five first year university students who had relocated from rural backgrounds and currently undertaking second semester at Curtin University of Technology in Western Australia completed an online survey comprising the homesickness subscale of the Dundee Relocation Inventory (DRI; Fisher, 1989), Furukawa, Harai, Hirai, Kitamura, and Takahashi's (1999) amended version of the Social Support Questionnaire (SSQ-6; Sarason, Sarason, Shearin, & Pierce, 1987), and four place-identity items from Hernandez, Hidalgo, Esther Salazar-Laplace and Hess's (2007) neighbourhood, city and island place-attachment and place-identity measure. Structured equation modeling (SEM) indicated university place-identity fully mediated the relationship between satisfaction with perceived social support and homesickness. Specifically, a one standard deviation increase in satisfaction with social support accounted for a .09 standard deviation increase in homesickness through university place-identity. This result suggests satisfaction with perceived social support reduces homesickness indirectly through place-identity processes. University-based initiatives for the reduction of homesickness in first year students from rural backgrounds are discussed.

Keywords: *students, place-identity, satisfaction with social support, homesickness, rural-to-urban relocation*

University teachers' effectiveness in relation to their certain background factors: A study

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DEVI, M. (Kurukshetra University)

The aim of this research was to study university teachers' effectiveness in relation to their sex, age group, caste and family, marital status, educational qualification, teaching experience, parental level of education, parental occupation, place of residence and faculty. A Descriptive Survey Method was used. The sample consisted of 168 teachers of different Teaching Department of Kurukshetra University, Kurukshetra (India), selected randomly. The Teachers Effectiveness Scale (Kumar & Mutha, 1982), having sixty nine items, was used and each item consisted of graded series of five self evaluated statements. Teachers had to rate themselves on a five point scale. A t-test was used for data analysis. The study indicated no significant difference in teachers' effectiveness in relation their sex. Teachers having greater or moderate levels of teaching experience were found to be more effective than those having less teaching experience; teachers having greater and moderate levels of teaching experience did not differ significantly. Parental educational level had no effect on teachers' effectiveness. Teachers with a parental occupational background of agriculture or job were more effective than teachers having a parental occupation background of business. No significant difference was found in effectiveness of teachers with parental occupational background of agriculture and those with job. No significant difference in teachers' effectiveness was found in relation to their place of residence. Older and middle aged teachers were more effective than those in the younger age group but there was no significant difference in teachers' effectiveness of old and middle aged. Teachers with a PhD and Master of Philosophy degree were more effective than postgraduate degree holders. No significant difference was found in teachers' effectiveness

on the basis of their caste and the faculties they belonged to. The present study had revealed that teaching experience and educational qualification of university teachers have a bearing on teachers' effectiveness and therefore, age of retirement of teachers should be increased and teachers should be given facilities / opportunities for further studies for their professional development.

Keywords: *university staff, descriptive survey method, teacher qualifications, teaching, teachers effectiveness scale*

Unraveling the complexity of host majority acculturation theories: An investigation into Greek nationals' beliefs about the role of the state vs. that of the immigrant groups in dealing with the ethno-cultural diversity within the national polity

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This paper aims to enrich our understanding of the factors influencing the majority's conceptions of issues related to the perceived socio-cultural place of immigrant and minority groups within diverse societies. The authors propose that in order to understand better the host nationals' diverse views on acculturation issues, acculturation attitudes should be theorized and measured as target and context-sensitive responses and also that a distinction should be made based on majority's beliefs about: 1) what the target groups *should do* in order to be accepted in the host society (expectations of the immigrants and minorities), and 2) how the state *should* deal with immigration/minority issues and the level of its interference in domains of private and public values (expectations of the state). Using a sample of 316 Greek nationals, the present cross sectional design survey explores variations in levels of endorsement of host majority's acculturation attitudes based on target, domain and expectations of immigrant/minority versus the state. As predicted, participants held different acculturative attitudes depending mainly on the life domains and the two sources

of expectations. The Greek respondents expected their state to appear more egalitarian and respect the individuality of the ethno-cultural groups whilst promoting policies to ensure that these groups would adopt to some extent the public values. On the contrary, they expected the immigrant groups to marginalise themselves from society by endorsing stronger exclusionist and segregationist attitudes. The current findings support the context specificity argument of host majority acculturation attitudes and highlight the importance of studying the representations that an individual holds about multiculturalism and of its material and symbolic realities referring to the state and its ideologies.

Keywords: *acculturation attitudes, ethno-cultural diversity, immigrants*

Unwrapping teacher socialization process: An interactionist approach

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Although previous research on teacher socialization vividly described what teacher socialization meant, it did not pay enough attention to how teachers could attain adaptation. Using an interactionism approach and integrating three analytical levels (task, group and organization), this research demonstrated the process of teacher socialization by exploring the relations between antecedents, proximal outcomes (contents of socialization) and distal outcomes (job satisfaction, job performance, and organizational commitment). Three hundred and forty-five teachers, from six middle schools in northwest of China, participated in our survey. Antecedents of socialization (including both contextual and personal factors) and proximal outcomes were measured using the Socialization Tactics Questionnaire for Teachers and Socialization Content Questionnaire for Teachers, respectively. Distal outcomes were either obtained from school (job performance) or reported by teachers. Data were analyzed by Structural Equation Model. The results showed that: 1. Organizational tactics have positive influences on distal organizational outcomes not only directly and but indirectly through school

understanding, task mastery and school politics; 2. the effects of teachers' proactive tactics on distal organizational outcomes were fully mediated by proximal organizational outcomes; 3. school understanding partially mediated the relations between support from coworkers and distal organizational outcomes; 4. cooperation from students' parents had direct positive effect on work performance, and role clarity mediated the relationships between cooperation from students' parents and distal organizational outcomes. The process of teacher socializations can be explained by learning and the content of teacher socializations serves as an important mediator.

Keywords: teacher socialization, socialization tactics questionnaire, job satisfaction, job performance, organisational commitment

Usability for display of register: The unconscious effect of colors

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The present study investigated whether the typical color of commodity improves the visibility of the touch-panel display or not. Fifty students participated in the experiment. The experiment was controlled by a computer; we devised a search task using a touch-panel display. Twenty-four buttons (6 lines x 4 columns) were presented on the touch-panel display. Each button was colored (red, brown, white, orange, yellow, or green) and labeled with the name of a vegetable. Twenty-four vegetables and their typical/atypical colors were selected from the preliminary investigation. There were two independent variables in the experiment, both of which were varied within participants. The first variable was type of color of the buttons - achromatic, typical or atypical for the vegetables. The second was type of presentation - either color-grouping or random. With color-grouping presentation, the buttons were grouped according to the color. Before the stimulus presentation, the name of the vegetable (target) was presented at the center of the display. The participants were asked to respond to the target position as quickly and accurately as possible by touching the button on the touch-panel display. The main effects of

color and presentation and the interaction between color and presentation were significant, indicating that the participants responded more accurately both when the buttons were grouped according to the color and when the buttons had achromatic/atypical color of the vegetable. The main effects of color and presentation were significant and the interaction between color and presentation was significant, indicating that the participants responded faster both when the buttons were grouped according to the color and when the buttons had typical color of the vegetable. The results suggested that the cognitive load was increased by the atypical color presentation and was reduced by that color-grouping presentation.

Keywords: visibility, touch-panel display, cognitive load, color-grouping presentation

Use of the human figure drawing in rain in children's clinical assessment

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The psychological evaluation with the use of projective instruments allows investigating unconscious aspects. Through the drawings it is feasible to understand the inner world and the mental functioning of the child. The request of the Human Figure Drawing in the Rain (DHF), proposed by Machover (1967), has been frequently used by psychologists in the assessment of personality. This study aims to identify the main performance of children facing the technique of DHF in the rain. Moreover, it is also intended to associate age, sex and school type attended by the children with the form and structure of the figure. This research evaluated quantitatively applying the DHF in rain and the DHF to identify cognitive potential (Weschler, 2003). The sample was composed of 150 children from public and private schools, aged between 5 and 12 years (57% males and 43% females). Information was imputed into a database on SPSS version 11.5 for Windows and analyzed by scanning frequencies of the variables and by the association of measures using the chi-square test. There were significant associations between age, sex and school type which the children attending related with the

figure's characteristics. Age and sex influence the presence of details in the figure ($p < 0.005$). The children's sex and the way they structure their body image and the presence of stereotyped figures also were significantly associated ($p < 0.005$). Through this study it is found that the association of some variables with the way the child draws. The rain element represents the external pressures experienced by the child. Male children of school age seem to be experiencing more of such pressures. This was an initial study with which the samples will be enlarged to identify other possible outcomes and associations.

Keywords: *human figure drawing, children, personality, pressure, mental functioning*

Using a notational system for comparing different theoretical approaches in behavioral medicine

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According to Dekker (2008) the field of Behavioral Medicine is witnessing a more elaborated use of theories to further comprehension of empirical findings. However, most of the times the differences among these models are elusive, especially in terms of the methodological consequences for acceptable research to elucidate central assumptions of such models. In this paper, the notational contingency analysis of behavior system proposed by Mechner (2008) is proposed as a methodological tool to compare such models, by means of translating representative exemplars of five theoretical approaches. The notational system consists of six components: actions, agents, two verbs, a modifier and a tag. An exercise of comparing five different theoretical approaches in Behavioral Medicine is presented in detail, in order to unravel subtle assumptions, similarities, levels of complexity and to highlight unclear aspects of these approaches. This paper presents diagrams of the stress and emotional regulation theory (Brown, Katzel, Neumann, Maier & Waldstein, 2007), the theory on health behavior, health and disease (Veenhof et al., 2007), the theory on contextual determinants of health behavior (Siegrist, 1996), the social cognitive theory of health behavior (Renner, et

al., 2008) and the theory of personality and health (Denollet, et al., 2006). The analysis based on the notational system proposed by Mechner, does not show important differences among three of the selected theoretical approaches. Diagrams brought about by the translation to the symbolic notation are rated from lesser to more elaborated systems. Resulting methodological consequences in their adoption for research in the field are discussed.

Keywords: *notational system, behavioral medicine, health behaviours, social cognition, personality*

Using a psychometric instrument for driver coaching

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The Driver Risk Index (DRI) is an online self report measure based on the Driver Stress Inventory (DSI) and Driver Coping Questionnaire (DCQ) incorporating additional items and measures specifically aimed at assessing behavioural risks of driving for work. This paper reports on the usefulness of the DRI profile to provide a way of beginning a coaching conversation to build self awareness of driving behaviours, emotions and perceptions that might increase the risk of being involved in a crash at work. Twenty highly trained driving instructors (coaches) attended a three day course at Cranfield University. Expert instruction on driver coaching and how to give DRI feedback was provided. Each of the coaches then approached at least one participant to take part in the study. Forty-five at work drivers completed an online DRI and their feedback profile was sent directly to their coach. Each coaching conversation using the DRI profile as a base from which to explore at work driving behaviour lasted for about 60 minutes and was either taped or written up immediately afterwards. The results showed that virtually all participants agreed with the results of the DRI profile, corroborating the profile feedback and validating its application in this context. A qualitative analysis of the coaching conversations showed that the DRI brought to awareness a whole range of different driver behaviours that were being performed with little conscious awareness of the risk these

behaviours posed. Coaching goals were constructed based on specific ways that each participant could manage their at work road risk to strengthen motivation to address driver behaviour at work. The DRI would seem to be a useful and promising tool in providing feedback in a coaching environment, enabling drivers to better understand how to direct behaviour towards driving in ways that are less stressful and safer. Further research needs to be undertaken to follow-up on the effectiveness of the DRI coaching conversations to manage at work road risk.

Keywords: *driver risk index, driver stress, driver coping, driving instructors, road safety*

Using acceptance commitment therapy principles with injured athletes

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The purpose of the current study was to investigate the anxieties commonly associated with athletic injury and to evaluate the effectiveness of a specific intervention (Acceptance Commitment Therapy; ACT) in managing such anxieties. Ten anterior cruciate ligament (ACL) injured athletes were allocated to one of two conditions (ACT or imagery) following reconstructive surgery. All participants attended four-weekly one-on-one sessions with a therapist and prior to and following the intervention, completed semi-structured interviews, two questionnaires measuring components of ACT (Acceptance and Action Questionnaire-II; Mindfulness Attention Awareness Scale), and a questionnaire regarding sport injury anxieties (Sport Injury Appraisal Scale). No statistical differences were reported between either of the groups on measures of ACT or anxiety from their pre-test measures. However, injured athletes did report trends indicative of decreased anxiety and qualitative findings suggested individuals felt more capable of managing the hardships of injury recovery and return to sport. It was concluded that ACT is an effective method for supporting injured athletes throughout their recoveries and when returning to sport, but that further considerations have to be made in providing psychological services to this group.

Keywords: *sports injury anxieties, acceptance and commitment therapy, mindfulness attention awareness scale, sport injury appraisal scale, sport psychology*

Using the Sherman & Funder (2009) method to validate a medical school selection model

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We aimed to validate a battery of personality and ability tests used for medical school selection against a variety of academic, clinical and behavioural measures collected over two years at a collaborating medical school. The pattern of relationships (significant correlations) provided suggestive evidence of validity, but the large number of relationships made clear interpretation difficult using traditional statistical approaches. The paper presents a reinterpretation of the results using the technique proposed by Sherman & Funder (2009), in which the probabilities of obtaining the observed number of statistically significant correlations (or the average size of these correlations) are computed using randomisation tests. Using the routines in the statistical package R, we found patterns of results indicating a partial confirmation of the validity of some predictors.

Keywords: *medical school selection, personality and ability tests, validation*

Using the theory of planned behaviour and a counterfactual thinking strategy to predict and facilitate upward family communication about mammography

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BreastScreen Australia offers free mammograms to women over the age of 40, and actively recruits women aged 50 to 69 (target women) to attend for screening. However, just 57% of target women in Australia utilise this service, which is substantially lower than the goal participation rate of 70%. This study explored

the viability of using daughter-initiated ('upward') communication within families as a vehicle for the delivery of mammography promotion messages to the mother. Upward communication about mammography was predicted using the Theory of Planned Behaviour (TPB), and a counterfactual thinking (CFT) intervention was piloted that aimed to increase motivation and consequently facilitate upward family communication about mammography. Daughters aged 18 to 39 years ($N = 131$) participated in this two-stage study, and were randomly assigned to either the control or experimental condition. Each participant completed a questionnaire that measured TPB variables in relation to initiating a conversation about mammography with her mother at Stage One. Experimental participants were also exposed to a negative-outcome vignette about a young woman failing to discuss mammography with her mother, and were instructed to record upward counterfactual thoughts in response using the stem "If only...". Participants reported whether or not they had been successful in initiating a conversation about mammography with their mothers at Stage Two. The TPB model effectively predicted both a participant's intention to discuss mammography with her mother, and actual performance of this behaviour. The CFT intervention did not increase intention to perform the behaviour, nor did it facilitate behavioural performance. However, many participants (54%) across experimental conditions initiated a conversation about mammography with their mothers, and reported positive outcomes to doing so, such as an increased likelihood that their mother will now obtain mammography. Upward family communication between mothers and daughters is a viable strategy through which to promote mammography to target women. Daughters demonstrated a willingness to participate in this strategy, and reported positive outcomes. The TPB is an effective framework for predicting upward family communication about mammography, although strategies other than CFT that may be used to supplement the TPB should be explored. Future research should also include behavioural follow-up with mothers.

Keywords: *mammography promotion messages, counterfactual theory intervention, family communication, theory of planned behaviour*

Validating the 'Franchise E-Factor' model of franchisee satisfaction

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Franchising is a 130 billion dollar industry in Australia and there are currently 63,000 franchisees who conduct business under a franchise relationship with 1,100 franchisors. This study sought to validate a franchise relationships model known as the "Franchise E-Factor", which explains how the relationship between a franchisee and franchisor changes over time. The Franchise E-Factor proposes six distinct stages of the relationship starting with "Glee", characterized by high levels of optimism and hope, to a low point known as the "Free" stage where the franchisee wants to break free of the confines of the relationship, and ending with the "We" stage which is characterized by an acceptance of the imperfections and interdependencies in the relationship. Using a 58-item franchisee satisfaction questionnaire, the author investigated the attitudes of 5,600 franchisees, rating their overall satisfaction with the franchise relationship over time. These satisfaction ratings were mapped using a locally weighted polynomial regression. The resulting chart validates the Franchisee E-Factor model, showing a significant drop in franchisee satisfaction over the first three years to a low point and then a steady rise, with a leveling out of satisfaction at around half of the original "glee" level. The franchise relationship follows a similar path to many interdependent relationships, including marriage, where unrealistic perceptions of the relationship are moderated by the realities of tolerating an imperfect partner and the need to realign expectations. Implications for managing interdependent business relationships are discussed.

Keywords: *franchising relationships, relationship stages, franchisee satisfaction, interdependent relationships, business management*

Variance in reading achievement accounted for by sociocultural and linguistic variables in Mexican American children

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Reading and linguistic theories indicate that individuals read with linguistic expectancy. This would suggest that a portion of reading achievement is accounted for by an individual's level of oral acquisition of syntactic structures in a language. Empirical studies indicate that socio-cultural variables account for or explain a large portion of academic achievement. There are no studies, however, addressing variance in reading achievement accounted for by socio-cultural and linguistic variables combined or in linear combination in Mexican American children. Three hundred and eighty-four ($N = 384$) bilingual (Spanish/English) children of Mexican American cultural heritage ranging from six through nine years of age were involved in the study. Four sample cohorts consisting of half males and half females within two months of their midyear (6-4 to 6-8, $N = 88$; 7-4 to 7-8, $N = 100$; 8-4 to 8-8, $N = 100$; 9-4 to 9-8, $N = 96$) were randomly obtained. The dependent variable was the Comprehensive Test of Basic Skills Reading Achievement subtest in English and the independent variables were family size, family structure, socioeconomic status (SES), acculturation, and oral acquisition of syntactic structures in English. The method of statistical/data analysis was multiple linear regression. Multiple regression coefficients between reading achievement, and socio-cultural and linguistic variables were .76, .72, .63, and .60 for 6, 7, 8, and 9 year old children, respectively. Thus, 36% to 58% of variance in reading is accounted for by socio-cultural and linguistic variables. The standardized regression coefficients, indicating which independent variable and in what amount, however, indicate that at six and seven years of age the preponderance of reading variance is accounted for by oral acquisition of syntax structures and at eight and nine years of age it was socio-economic status (SES), and acculturation and family size and family structure did not explain any significant portion of variance in reading achievement. These results would suggest that at 6 and 7 years of age linguistic considerations be given to instructional materials, method of

teaching, curriculum, and professional development and at 8 and 9 years of age the child's SES and acculturation should be given consideration.

Keywords: *oral acquisition, linguistic variables, school curriculum, socio-economic status*

Viparita-Karani Mudra (Yoga Mudra) in the management of stress of irritable bowel syndrome patients

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Irritable bowel syndrome (IBS) is a gastrointestinal disorder in which most patients report symptoms like cramping, abdominal pain, bloating, constipation, and diarrhea. IBS causes a great deal of discomfort and distress. In the present investigation, the effect of Viparita-Karani Mudra (a Yoga mudra) is seen in the management of stress of irritable bowel syndrome patients. For this, 60 male patients in the age range of 22 to 35 were taken from the Out Patient Department of Kayachikitsa, S.S. Hospital, Banaras Hindu University, Varanasi, India. First, they were rated on stress scale. Then the patients were randomly divided into two groups. In one group, 30 patients were given placebo (Glucose powder in capsule) with regular training of Viparita-Karani Mudra and in the other group, 30 patients received only placebo. After one month, the patients were again rated on the same stress scale. The results indicated that those patients who received the training of Viparita-Karani Mudra showed the significant decrease in the symptoms of stress than those who had not received the training of Viparita-Karani Mudra. On the basis of the present study it is concluded that Viparita-Karani Mudra relieves stress and improves digestion.

Keywords: *irritable bowel syndrome, yoga, stress, digestion, distress*

Waste governance and behavioral attributes toward recycling implementation

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The significance of waste recycling is becoming increasingly important owing to global population increase and technological progress. Implementing a strategy to promote resources recycling under resource shortages is a viable approach to fast industrialization and urbanization. To support policy transformation, reforming the current recyclable resources recycling system is essential. The status of solid waste management in a city is often considered an index for assessing governance. In cities of the developing world, the informal sector plays an important role in recycling and management of solid waste. This paper examines the position of recycling as a tool for planning and reform of solid waste management in developing countries. Our report is from field observations and reviews of relevant legislation, policy documents and reports on solid waste recycling and governance. Recent efforts to visibly improve governance through reform of solid waste recycling are also highlighted. The significant roles of informal recycling were integrated into the framework of reforms in waste recycling and governance. The development in technological trends aimed at poverty alleviation, improvement of the quality of life as well as environmental sustainability will be considered. This paper reveals the lapses in recycling strategies and calls for recognition and support of recycling activity and empowerment of people involved within its context.

Keywords: waste recycling strategies, waste management, environmental sustainability, quality of life, global population increase

Wellbeing in volunteer health care workers: A perspective of the motivational pathway of the Job Demands-Resources Model

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Using the motivational pathway of the Job Demands-Resources (JD-R) model, the aim of this study was to examine the antecedents of engagement and connectedness in a sample of Australian volunteer health care workers. Survey data were collected from 471 volunteer participants and analysed using structural equation modelling (SEM) methods. Three job

resources (social support, performance feedback and training) were used to test whether job resources would increase health, volunteer satisfaction and intent to continue through work engagement and connectedness. Results supported the motivational pathway of the JD-R model in volunteer health care workers. Specifically, job resources were positively related to engagement and connectedness. However, only connectedness turned out to be important for explaining the relationship between job resources and the three positive work outcomes. This study offers insight into ways in which the JD-R model (originally developed in the context of paid workers) can be used to understand and improve workplace health and productivity in nonprofit organisations. As the study suggests, the relatively new construct of connectedness, as measured by the revised connectedness scale, may be potentially useful in furthering this understanding.

Keywords: job demands-resources model, volunteer health care workers, work engagement, work connectedness, job resources

What are you drinking? Young people's knowledge of alcohol "units"

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Guidelines for safe alcohol consumption in the United Kingdom and many other countries are commonly presented in terms of "units" of alcohol or "standard drinks". The aim of this study was to examine the accuracy of young people's knowledge of units and standard drinks, and their use of this information when pouring their own alcoholic drinks. In Study One, a computer-administered questionnaire was completed by 402 secondary students aged 16 to 18. This questionnaire assessed knowledge of definitions of alcohol units and guidelines for safe alcohol consumption and accuracy of estimates of the alcohol content of different alcoholic drinks. It also included measures of alcohol outcome expectancies, impulsivity, and sensation seeking. In Study Two, 122 university students completed the same computer-administered questionnaire and a task which included pouring their "usual" alcohol drinks and what they believed to be "units" of different alcoholic drinks. Very few participants in either

sample had accurate knowledge of alcohol units. Knowledge of definitions and guidelines was not related to practical knowledge in terms of knowing the alcohol content of different alcoholic drinks or accuracy of pouring alcohol units. Most respondents rated their understanding of alcohol units and guidelines as poor and most wanted more information. The pouring exercise revealed that participants' "usual" drinks were significantly larger than one "unit" or "standard drink", and that they overestimated the volume of a "unit" of alcohol. People who poured larger drinks for themselves reported greater alcohol consumption and were higher in sensation seeking and impulsivity. There is a need to improve young people's knowledge of the alcohol content of various drinks so that they can make better informed choices about their own alcohol consumption. There is some evidence that the drink pouring activity used in this study could be a useful method for increasing knowledge of alcohol units. Inaccurate knowledge of alcohol units also has implications for psychological research which relies on self-reported alcohol consumption. Poor understanding of alcohol units and guidelines also means that young people may be exposed to greater alcohol-related risk than they are aware of.

Keywords: *alcohol use, impulsivity, sensation seeking, alcohol outcome expectancies, guidelines for young people*

What is the void made of? Australian immigrants draw their experience

LAZAROVA, L.

The aim of this field work study concerns the existing relations between the experience of significant real-life change (immigration, permanent or temporary changed residence) and its reflection in individual psychological realms. It gathers and interprets valuable data, making explicit some of the complex intrapsychic phenomena that mediate the process of transition and acculturation. This qualitative study was repeated biannually. The method included a Questionnaire with instructions and three open questions. The answers were analysed for their content and grouped by frequency; Thematic Content Analysis of the

artefacts (directed drawings) was used and Semi-structured interviewing for clarification of pattern overlapping and manifested versus latent content, was used. The participants are from two highly heterogeneous, real-life groups of immigrants (mostly students and overseas qualified professionals). The content analysis shows that although at the deepest psychological level all are in possession of similar emotional drives, the significant individual difference in the narratives and their conceptualisation lies in between. Almost everybody is deeply affected by missing family members and most often this is the Father's figure. It is a surprise that unexpectedly the Native Food category showed the same range of frequency among the missed elements in the recent life of the studied immigrants. The Mother's figure syncretises almost inseparably with the themes of food, childhood and other siblings. While at its bottom-line categories' received results are very similar, further the process goes through ramification and less frequency answers (friends, possessions, natural environment) and unfolds into a vast diversity of highly individualized structures. These data from less-studied psychological issues experienced by immigrants highlight the variability of psychological passages and possible facilitations. The methods used and the related efforts applied from the participating persons contained inbuilt certain integrative 'healing factors' which are supposed to elevate their self awareness and unfold their creativity, resilience and imagination.

Keywords: *real-life change, creativity, resilience, imagination*

What's going on here? Drug and alcohol abuse, memory loss, and trauma: An individual case study

BUCKBY, B. (James Cook University)

To aim of this session is to further define the efficacy of individual therapy with Indigenous clients; creative therapy responses to the ways in which inherent strengths and resiliencies inform, transform, and are also distorted by distress and dysfunction; intergenerational transmission of trauma; and valid outcome

evaluation. In 2007 an Indigenous woman (R) aged 48 was referred for a cognitive assessment due to short term memory difficulties at work. She had a 20 year history of poly drug and alcohol misuse up to age 36. The assessment showed she was of high average intelligence and had age appropriate memory skills. R also had a lengthy history of traumatic events which included violence, and threats to kill R and her two children, being crushed by a truck with resultant chronic pain (25 years), and fear due to ex-partner's stalking (20+ years). After assessment she was referred to a specialty service working with similar women. A year later R was re-referred with a diagnosis of PTSD and a lengthy process of trauma therapy began in 2008. R chose individual therapy with a non-Indigenous psychologist to protect her story and confidentiality. Standard evidence based treatment for PTSD was negotiated collaboratively; however, imaginal exposure was too distressing. Principal treatment adaptations included mindfulness exercises particularly those invoking imagery of country, and a systematic reappraisal of R's life and trauma events. The reappraisal or restorying of R's life drew on her historically evident strengths and resiliencies. The process also requires greater psychologist self-disclosure to sustain the collaborative therapeutic alliance, and learning from R by asking for help to understand culturally specific meanings. Results included reduced dissociation, improved recognition of onset, and improved self-coping; improved quantity and quality of sleep, and insignificant reduction in depression, anxiety and stress symptoms. Retraumatization through re-experiencing past events was triggered by frequently removing her grandchildren from family violence. Historical events serve as powerful maintaining risk factors for emotional distress in the present due to intergenerational "transmission" of distress and dysfunction. In this case R's mother was stolen generation, R's foster care and other life events, R's daughter and grandchildren involved in drug and alcohol related family violence. Practice based evidence could potentially provide a foundation for psychological interventions with Indigenous clients.

Keywords: Indigenous clients, trauma, post-traumatic stress disorder, intergenerational transmission, practice based evidence

When Asperger Syndrome runs in the family

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This study is based on two theoretical rationales. Firstly, family adaptability and cohesion has been found to be a significant unique variance in explaining psychological well-being of its members. There is a growing body of evidence suggesting that having a child with a disability negatively impacts on family's adaptability and cohesion. However, to our knowledge, only one study has focussed on families with children with autism spectrum disorders (ASD) and none specifically on the Asperger Syndrome (AS) population. Secondly, although the phenomenon of broader autism phenotype in parents has long been broached, research is still emerging on the implication of parental diagnosis of AS on families of children with AS. Based on these rationales, the purpose of this study is two-fold: 1) to examine the impact of having a child with AS on the family's adaptability and cohesion; 2) to explore if having a parent also diagnosed with AS will further impact on the family's adaptability and cohesion. Participants ($N = 150$) completed a questionnaire which consisted of diagnostic information, and the Family Adaptability and Cohesion Scale (Olson, Bell and Portner, 1982). Subjects were divided into three groups according to diagnosis of AS in the family: one parent plus one child have AS (Group One; $N = 40$); only child but no parent has AS (Group Two, $N = 55$); and no child or parent has AS (control, $N = 55$). Results indicated statistically significant differences ($p > .05$) between the three groups in family adaptability [$F(2, 150) = 11.59, p < .001$] and family cohesion [$F(2, 150) = 21.57, p < .001$]. Post-hoc comparisons found Group One reported significantly lower scores than Group Two in family cohesion ($p < .001$) but not in family adaptability ($p = .842$). In comparison to the control group, Group One and Group Two reported significantly lower scores in both family adaptability and family cohesion. These results suggest that 1) having a child with AS significantly impacts on the family's adaptability and cohesion; 2) parental diagnosis will further decrease family cohesion but not adaptability. These findings give voice to families of children with AS, particularly those having a

parent also diagnosed with AS. Implications for therapeutic intervention for families living with AS in either child and/or parent generations will be drawn. The appropriateness of an ecological approach when working with these families will also be highlighted.

Keywords: family adaptability, family cohesion, children with disabilities, asperger's syndrome, parental diagnosis

When is abusive supervision not related to employee psychological health? The moderating effect of individual power distance orientation

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People generally believe that abusive supervision leads to employees' poor psychological health. However, this relationship is not always true. The fundamental values of power held by employees will have an impact on this relationship. This study examined how individual power distance orientation (defined as the extent to which an individual accepts the unequal distribution of power in institutions and organizations) affects the relationship between abusive supervision and employees' psychological health. In one sample 825 employees from a manufacturing company located in southeastern China rated their power distance orientation, psychological health, and their perceptions of abusive supervision. Results showed that abusive supervision was negatively associated with followers' psychological health ($r = -.199, p < .01$). The relationship between abusive supervision and employees' mental health was moderated by individuals' power distance orientation ($\Delta R^2 = .011, \beta = .107, p < .05$), such that this relationship is statistically significant for followers who were lower in individual power distance orientation ($\beta = -.259, p < .01$), but not statistically significant for followers who were higher in individual power distance orientation ($\beta = .085, p = .481$). Abusive supervision has been seen as a significant social problem which would ruin followers' mental health. This study extends previous research by showing that interactive effects of abusive

supervision and followers' power distance orientation help explain psychological health among followers. The findings suggest that focusing on fundamental values held by employees contributed to a better understanding of the impact of leader's deviant behaviors. In addition, the interaction of leadership and values followers held in relation to mental condition and employee reactions provide an interesting area that needs further exploration in order to enhance our understanding of when and how leaders affect those they lead.

Keywords: abusive supervision, individual power distance orientation, psychological health, employees

When latent inhibition influences creative performance: The moderating effect of epistemic motives on cognitive style

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This study examines how epistemic motives moderate the effect of Latent Inhibition (LI) on creative behaviors. Reductions in LI, the capacity to screen from conscious awareness stimuli previously experienced as irrelevant, have been generally associated with the tendency towards creativity. A number of studies suggest the individual differences in LI. This study proposes that the effect of cognitive styles (LI) on creative performance is moderated by need for cognitive closure (NFC). Individuals scoring high on NFC are likely to quickly grasp closure by relying on early cues and the first answer they come across. The need for closure is also said to lead to a very narrow information search and a higher tendency to use cognitive heuristics when it comes to finding a solution to a question. Hence, we hypothesise that higher NFC will enhance the tendency to adopt default cognitive heuristic, thus expanding the difference in creative performance between high and low LI. Two experiments were conducted: one in the laboratory and the other in the field. We used the latent inhibition paradigm (LI; Lubow, 1989) to divide participants into high and low LI group, and manipulate NFC both by situation (time pressure) and by disposition measure (Webster

& Kruglanski, 1994). Creativity was measured by lifetime creative achievements and the Runco Ideational Behavior Scale (RIBS). Results show that low LI individuals are more creative than high LI both in creative achievements and RIBS, and the difference in creative performance between high and low LI is expanded when with higher NFC. This finding supports the proposed moderating function of epistemic motives (NFC) on the tendency to adopt preferred cognitive heuristics (high/ low LI) and be more cognitively inflexible. We are also investigating other possible moderating factors (working memory capacity and cultural effect) that may have an impact on the LI-creativity relationship. Implications for potential utility in application of this motivated social cognition research to human factors and design are discussed.

Keywords: latent inhibition, creative performance, epistemic motives, cognitive style, heuristics

Why am I lowering my carbon footprint? Autonomous motivation and sustainable lifestyle change

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As a first world nation, the Australian community contributes to the dangerous level of greenhouse gas emissions in the atmosphere by using resources at a much higher level than is environmentally sustainable. To be effective at lowering household carbon footprints from some of the worst in the world towards sustainable levels, it will be essential that the pro-environmental behaviours (PEBs) adopted are generalised across multiple target behaviours, have a large environmental impact, and are maintained. The current research will test a model of motivation for effective PEB developed primarily out of Self-Determination Theory. Through an online questionnaire, the research will explore the relationship between the type of motivation people have for pro-environmental behaviour (i.e. their reasons for adopting PEBs and changing unsustainable habits) and proposed antecedents and consequences of motivation; aspects of the social environment which impact on that motivation, and the level and types of PEB people engage in. Results are pending. However,

it is hypothesised that self-determined (autonomous) motivation for pro-environmental behaviour will be related to a wider range (generalisation) and maintenance of pro-environmental behaviour than externally regulated motivation, or amotivation towards environmental problems. Perceived autonomy, competence and relatedness in relation to environmental problems and action are expected to impact on motivation for PEB. The ideal social environment for autonomous motivation is hypothesised to be, and be perceived as, supportive but not controlling, interesting but not over-challenging, and accepting as opposed to rejecting. Results, implications, and plans for further experimental and longitudinal research to test causality of relationships and to identify optimal ways of supporting autonomous PEB adoption will be discussed. It is proposed that a general move towards a positive, holistic approach to environmentalism is necessary, one aspect of which is to make environmental action more satisfying, interesting, and fun, through linking pro-environmental behaviour with the meeting of psychological needs for competence and relatedness, as well as autonomy.

Keywords: pro-environmental behaviour, carbon footprint, self-determined motivation, externally regulated motivation, environmental issues

Why people take more survival actions than damage mitigation actions for hazards: Is cost the key factor?

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The aim of this research was to show if there is a relation between businesses' and households' performance of survival actions and mitigation actions to prepare for earthquakes and their estimate of the cost of those actions. Two studies examined businesses' and households' completion of a sample of twelve mitigation and survival actions, their estimate of the costs of those actions in their own case, and their attributions for why they have not carried out the actions. Damage mitigation actions were divided into actions mitigating damage to the

building and actions mitigating damage to contents. Households completed fewer mitigation actions than survival actions, and businesses completed fewer structural mitigation actions than contents damage mitigation actions and survival actions. A logistic regression showed that with households there is a significant relationship between the perceived cost of four of the twelve actions and the probability of carrying out the actions. With companies there is no such relationship. On the measure of attributions for not performing the actions, for both households and businesses, the perceived cost of the actions was only the 4th, 5th or 7th most common attribution. Attributions cited more frequently than costs were: 1. I haven't thought about it; 2. It's not a priority, and 3. It would make no difference. There is a relation between performing preparation actions and cost, but it appears that the cost factor is secondary to other factors in explaining what actions people do and do not take to prepare for hazards.

Keywords: hazard preparation, survival actions, damage mitigation, earthquake, cost factors

Work Engagement and the role of psychological climate, value congruence, and social identification

VALENCIA, M. (De La Salle University)

The research tested two models that looked separately at how work engagement is influenced by value congruence and social identification (organisational and work group levels), and psychological climate. Drawing from the Social Categorisation Theory (Turner et al., 1987) and predictions from a Person-Organization (P-O) fit perspective, both models premised that psychological climate mediates the relationship of work engagement with value congruence and social identification. Survey data from 431 employees of various service organisations in the Philippines was analysed using structural equation modeling. Findings supported the mediating role of psychological climate in both models (organisational and workgroup levels). Furthermore, a strong positive relationship was observed for organisational level identification and value

congruence. Workgroup level correlation on the other hand was weak. It was also observed that identification had stronger direct effects with psychological climate compared with value congruence. Organisational value congruence also had direct effects on work engagement. It was concluded that organisational level dynamics (compared with the workgroup level) of identification and value congruence are more pivotal in their predictive roles in creating a psychological climate of work engagement. Value congruence serves as a basis for an individual to assess the extent of fit with the organisation but it is not sufficient to drive an employee in 'going the extra mile' on behalf of the organisation. Organisational identification is further needed to provide a kind of social 'glue' that would bind the perceived aspects of fit between the self and the organisation. The findings were also contextualised in terms of how organisational culture is suggested to be linked to work engagement.

Keywords: work engagement, psychological climate, value congruence, social identification, organisational dynamics

Work engagement on nurses in Surabaya. How nurses manage their emotion at work

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Nursing is one of three professions that is particularly susceptible to feeling decreased work engagement. The indicators of low work engagement are low levels of energy and mental resilience, and lack of a sense of significance, enthusiasm, inspiration, pride and challenge while working. This paper aimed to test the relationship between emotional labour and work engagement in nurses in three hospitals in Surabaya. The results indicate that there was a positive correlation between 'surface acting' and work engagement ($r = 0.518$, $p = 0.001$) and there was also a positive correlation between 'deep acting' and work engagement ($r = 0.593$, $p = 0.000$). The implications of these findings for health-care workers are discussed.

Keywords: *Emotional labour, Surface acting, Deep acting, Work engagement, Nurses*

Work engagement, personal initiative and performance in a sample of Mexican police officers from Preventive Police

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The main objective will be to discuss the relationships between the concept of self-efficacy and work engagement, personal initiative and performance. Therefore, by reviewing the theoretical models and empirical results that have found relationships between these concepts, we will suggest a model. Research shows that work engagement has a positive relationship with job behavior such as performance and proactive behavior, and that self efficacy is related to personal initiative. Personal initiative, like work engagement, is related to performance too. The sample is composed of 243 police officers from Public Security, also known as Preventive Police, from two police agencies in the metropolitan area of Monterrey, Nuevo Leon, Mexico. The variables analyzed by self-reported questionnaire are self-efficacy, work engagement, personal initiative and subjective individual performance. Maximum likelihood estimation methods of structural equation modeling (SEM) were used to test the five competing models. The fit of two of the five models are appropriated (Model 1: $\chi^2 = 249.668$; $df = 132$; GFI = .897; RMSEA = .061; CFI = .896 and Model 3: $\chi^2 = 232.424$; $df = 132$; GFI = .903; RMSEA = .056; CFI = .911). In one model the path between self-efficacy and engagement is not significant ($t = 1.560$), and in the other model the path between personal initiative and performance is not significant ($t = 1.086$). The two models with appropriate fits have all path coefficients being significant ($t > 1.96$). Results confirm that both personal initiative and work engagement can be related to performance. In both models self efficacy predicts personal initiative. Theoretical and practical implications of these results are discussed as well.

Keywords: *self-efficacy, work engagement, personal initiative, work performance*

Work stress and work-family conflict: Implications for employee satisfaction and health

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Work stress continues to be a problem in most sectors of the workforce, and has many negative consequences for both employees and organizations. Given the current economic climate, examining factors that affect employees' perceived levels of stress is an important research topic among occupational health researchers. The present study tests a model that examines antecedents of work stress and their effects on various outcomes. These included an outcome at the individual level (i.e., emotional exhaustion, which is often referred to as the prototype of stress), an organizational-level outcome (i.e., job satisfaction), and an overall outcome (i.e., life satisfaction). Data were collected from 214 employees, using a confidential and anonymous questionnaire. Three separate hierarchical regressions were conducted, each incorporating the same set of predictors. The first block included demographic variables (i.e., age, gender, marital status, education) as well as work situation characteristics (i.e., salary, tenure, and number of hours worked per week). Work demands were entered in the second block, and family demands were entered in the third block. The fourth block included work-family conflict, including conflict due to work interfering with family (WIF) and conflict due to family interfering with work (FIW). Perceived organizational support and family and friend support were entered in the final block. With emotional exhaustion, job satisfaction, and life satisfaction as outcomes, the model accounted for 59%, 68%, and 42% of the variance, respectively. Across all models, consistent predictors included perceived organizational support and work-interfering-with-family conflict. That is, employees who indicated higher levels of perceived organizational support were more likely to report greater life and job satisfaction, and were less likely to experience emotional exhaustion. In contrast, employees

who reported higher levels of work-interfering-with-family conflict were less likely to report being satisfied with life or with work. Further results indicated that both work and family demands contributed to the work-related outcomes of emotional exhaustion and job satisfaction. Demographics differentially predicted to emotional exhaustion and life satisfaction. Family support contributed to overall life satisfaction. Theoretical and empirical implications of the results are discussed.

Keywords: *work stress, employee stress, work-family conflict*

Work-family conflict and enrichment predicting mental health: Direct, indirect and crossover effects

HAAR, J. (University of Waikato), BROUGHAM, D. (University of Waikato)

The aim of this research was to test direct and crossover effects of work-family conflict (WFC), family-work conflict (FWC), work-family enrichment (WFE) and family-work enrichment (FEW) towards anxiety and depression and the potential moderating effects of enrichment on conflict (direct and crossover). Structural equation modeling confirmed the unique properties of the dimensions tested with a sample of 266 dual-career couples. Regression analysis was conducted with separate models for male and female outcomes. Predictor blocks of male and female work-family dimensions and interactions were included in all models to also test crossover effects. For males, WFC was positively related to depression, and FWC positively related to both anxiety and depression, while WFE was negatively related to both outcomes. For females, WFC was positively related to anxiety and depression, and FWC positively related to depression, while WFE was negatively related to both outcomes and FWE negatively related to depression. Direct crossover effects were found with female FWC positively influencing male depression, while female WFE negatively influenced male anxiety. Furthermore, male WFE was negatively associated with female anxiety, while male WFC was negatively associated with female anxiety and depression, and male FWC positively associated with female anxiety and depression.

For male outcomes, anxiety was significantly affected by male WFE buffering FWC. For female outcomes, anxiety and depression were significantly affected with female WFE buffering FWC. Furthermore, female WFE and FWE buffered the effects of WFC and FWC respectively. Furthermore, some significant interaction effects were found to crossover to the partner. For male depression, females with high FWE were found to buffer the effects of FWC, leading to lower partner depression but only at low levels of FWC. For female depression, the effects were similar for both significant interaction crossover effects. Male FWE buffered both male WFC and FWC, leading to lower partner depression at low levels of conflict but higher levels of depression at higher levels of conflict. This study supports work-family conflict and enrichment dimensions influencing employees and their partners, and the buffering effect of enrichment on conflict's influences on mental health. Overall, conflict effects dominated and enrichment had minor direct and crossover effects but strong buffering effects.

Keywords: *work-family conflict, work-family enrichment, anxiety, depression, dual-career couples*

Working with barriers: A comparison of job seekers with mental health problems with and without additional drug and alcohol problems

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Workforce participation for Australians with mental illness remains low, although improved work status reduces symptoms, improves self-efficacy, and improves life satisfaction. Almost half of those with mental illness also have difficulties with substance use, and for these people workforce participation rates are very low (Crompton et al., 2005). The study aimed to understand the additional barriers to employment resulting from drug and alcohol use among people with mental illness. Participants were clients of an employment service provider who had psychiatric disabilities with and without significant drug and alcohol problems identified using the AUDIT and DAST-10. Participants were compared on measures of current psychosocial and cognitive function, symptomatology,

educational history and employment history. There were no significant differences in function or history between the two groups. However, a number of areas of greater unmet needs were identified among the drug and alcohol group using the CANSAS. Since the results do not show any significant differences in function or history between the two groups, there may not be any justification of designing separate interventions for the groups. However, the drug and alcohol user group would need additional emphasis to improve their quality of life by fulfilling their needs related to food, accommodation, mental and physical health and other aspects of everyday life, as higher unmet needs are evident among this group in CANSAS data. As these needs entail a wide range of aspects of life, effective communication and integration among different service sectors are needed to ensure the employment participation of people with co-existing mental illness and drug and alcohol issues as well as their quality of life.

Keywords: *workforce participation, mental illness, substance use, self-efficacy, life satisfaction*

Workplace ostracism in China: Gender difference on psychological health and job satisfaction

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Accumulating evidence supports the notion that workplace ostracism is a universal experience, but less is known about gender differences in terms of workplace exclusionary behavior. The current study explored the moderating effect of gender on the relation between workplace ostracism and psychological health and job satisfaction. This research tested the applicability of Workplace Ostracism Scale (WOS; Lance et al., 2008) in China and examined the different effects of workplace ostracism on psychological health and job satisfaction in men and women. A Chinese version of the WOS was developed on a sample of 137 persons (57 men and 80 women) and cross validated on a second sample of 300 employees (160 men, 136 women and 4 unknown) from various companies. Internal consistency and confirmatory factor analysis were used to confirm the reliability and construct validity of the WOS. The WOS proved a

reliable and valid measure in Chinese workplaces. A moderated hierarchical regression analysis on psychological health and job satisfaction yielded an interaction between ostracism and gender with a significant change in R². The present study provided a useful measure for Chinese workplace ostracism literature. We also demonstrated that, the effects of ostracism are moderated by gender. At lower levels of perceived ostracism women indicated higher satisfaction and psychological health than men whereas at higher levels women indicated lower satisfaction and psychological health compared to men.

Keywords: *ostracism, gender differences, occupational stress, job satisfaction, work ostracism scale*

Yoga for children with intellectual disability

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Many studies have highlighted the efficacy of Yoga as a potent tool in bringing out positive changes in the physical and psychological wellbeing of a person. Its application for people with Intellectual Disability (ID) has not been explored enough scientifically. This study is an attempt to answer two questions. First, can Yoga be taught to children with ID and if so how can it be done? The second question is whether Yoga is beneficial for people with ID. Twenty-five special educators were trained in yoga and also in the methodology of how to teach the same to people with intellectual disability. They in turn taught Yoga to 50 children with ID. A before and after evaluation was conducted on measures like number of days the child attended school and changes in his/her Individualized Programme Plan comprising of domains such as motor, self help, language etc., and also changes in individual symptoms that some of the children had as associated conditions. The design was a pre and post quasi experimental design and the experimental group was compared to a control group. The results showed Yoga can be taught to children with ID if a person is trained in Yoga and also in the method of teaching yoga to people with ID. The results also showed significant changes in the health status of the children by

way of improvements in their attendance to school. There were also significant changes in some of the areas in their Individualized Programme Plans (IPP). The study also showed unpredicted results namely changes in many of the associated symptoms that many of the children had. Another set of spurious results were changes in the health status of the special educators as they had to practice Yoga themselves in order to teach the children. Yoga can be taught to children with ID if the educator is trained in the methodology of teaching Yoga to children with ID. Yoga is effective in making positive changes in children with ID.

Keywords: yoga, Intellectual disability, well-being, child health, health status of special educators

Abstracts of the 27th International Congress of Applied Psychology

Electronic Poster Presentations

A comparative analysis of the psychological health status of Chinese undergraduates today

OUYANG, W. (Changsha University of Science & Technology)

Based on multidimensional comparative analysis of the psychological health status of Chinese Undergraduates today (e.g., urban and rural, well-off/poverty, boys/girls, sibling/singleton), we will reveal Chinese college students' mental health status and characteristics. 1835 Chinese freshmen are tested with SCL-90 in 2009. The scale was adapted to suit the Windows on the online computer test designed by us. Each student used a computer. The data was collected by SPSS17.0 and the main statistical analysis was a t-test. The result showed that: I) Generally speaking, the psychological health of the undergraduates is good; II) the psychological health of undergraduates coming from the rural areas is poorer than that of the students coming from the city. Similarly, the same trend was found for female students and undergraduates experiencing poverty. Therefore, we concluded that it is necessary to provide an improved and inclusive education of psychological health in line with college students' mental characteristics, economic status, and individual differences.

Keywords: mental health, China, undergraduate students, health education, individual differences

A comparative study of anxiety, neuroticism, extraversion and adjustment variables of basketball, hockey and volleyball men players

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The purpose of this study was to assess the Anxiety, Neuroticism, extraversion and adjustment levels among the intercollegiate basketball, hockey, and volleyball men players of Kurukshetra University. Anxiety is a complex emotional experience often unconscious in origin, with fear or dread as its most notable characteristic. It is a symptom in various nervous

and mental disorders, where the term anxiety state may be used and can be defined operationally as the autonomic response pattern characteristics of an individual organism after a noxious stimulus. Neuroticism is a state characterized by emotional instability, anxiety, low self respect and due to mental disorders. Neuroticism should not be identified with neurosis, since neurotic symptoms may be shown by healthy individuals too. Neuroticism is generally assessed by special scale or personality inventories. Turning outward used primarily in personality theory to refer to the tendency to direct one's energies outward to be concerned with and qualification from the Physical and social environment. Adjustment consists of psychological process by means of which individual manage to cope with various demands and processes of life. For the study purpose the terms Neuroticism is defined as 'A neurotic is a person of imbalanced judgment, one whose actions are promoted by emotions rather than by dictates of calm reasoning. Eysenk says that the lack of socialibility must be regarded as an index of neuroticism. Extraversion is defined as 'The traits of extraversion a sociable lively, active, assertive, sensation seeking, carefree, dominant, urgent and venturesome.' Adjustment is defined as 'Adjustment consisting of psychological processes by means of which individual manage to cope with various demands and processes of life.' The study involved 150 subjects aged 18 to 22 years who were randomly selected, 50 from each of the sports were taken for this study. The questionnaire on Sinha's anxiety scale by Dr. Durga Nand Sinha, Maudslay personality inventory by S.D. Kapoor and S.S. Jalota and Bells adjustment inventory by S.M. Mohsin variables were administered to find out the various psychological variables on anxiety, Neuroticism, extraversion and adjustment among the different men sports groups. After collecting the data the descriptive statistical techniques were computed i.e. means, standard deviation and t-test were used. On the basis of results of the present study, we can conclude that Basketball players have more anxiety and neuroticism than the players of hockey and volleyball. Basketball players are more extraverts than the players of hockey and volleyball players. Volleyball players are better adjusted in comparison to hockey and basketball players.

Keywords: *anxiety, neuroticism, extraversion, adjustment, sport*

A comparison of adaptive change behaviours under three conditions

BOWLES, T. (University of Ballarat)

The Adaptive Change Model (ACM) was developed as an alternative form of the Transtheoretical Model of Change (TTM) to address some of the criticisms of early operationalization. Both models provide a framework for measuring the potentialities of change and to facilitate targeted behavior change in general and clinical settings. The general aim of the research was to explore an alternative model of adaptive change to the Transtheoretical Model of Change (TTM). Specifically, the first aim was to validate the Adaptive Change Model (ACM). This was followed by a comparison of the adaptive functioning of a group beginning career counselling, a group beginning clinical therapy and a non therapy group. The eight factors of the model were validated, and the study comprised of 238 participants. A between groups comparison design was used to compare the respondents. The clinical therapy group was comprised of a similar number of males and females ($n = 85$) to those receiving career counselling ($n = 88$) and the non therapy group ($n = 65$). The findings from the CFA indicated a good fit between the model and data. A comparison of the mean scores of the factors of the ACM showed respondents seeking clinical therapy were lower on self-rating of factors related to adaptive change than a group receiving career counselling and a non therapy group. The ACQ factors correctly predicted the allocation of 79.3% of the clinical and non therapy respondents which confirmed previous research. The relevance of the findings for therapeutic interventions and future research are discussed.

Keywords: *adaptive change behaviour, transtheoretical model of change, adaptive change model, career counselling, clinical therapy*

A comparison of the problems on time management and self-discipline between

morningness and eveningness groups in Japanese college students

SATO, T. (Tohoku Bunka Gakuen University)

Eveningness, a behavioral pattern characterized by a large shift in the sleep patterns, might lead to many kinds of problems in college students, because they have to act, to some degree, in accordance with the timetable of daily work in their colleges. To consider mechanisms that engender shifts in sleep schedules of college students and to devise ways to solve accompanying problems, we must pay attention not only to environmental factors but also to behavioral and psychological factors. In this study, the author focused on the relationship of eveningness to some problems related to time management and self-discipline. A total of 497 students (184 females and 313 males) from two colleges located in the city of Sendai in Japan participated in this study. A self-report questionnaire was administered to all the participants. The questionnaire included items pertaining to night-time sleep and daytime arousal; these items were obtained from the life habit inventory (TMIN-LHI), a Japanese version of the Morningness-Eveningness Questionnaire (MEQ) and the Epworth Sleepiness Scale (ESS). The questionnaire also included items related to certain problems in college-level attention deficit hyperactivity disorder (ADHD), such as inattention, impulsivity, hyperactivity, time management, and self-discipline; these questions were taken from the translated Japanese version of the College-level ADHD Questionnaire (CAQ; Hatayama et al., 1998). On the basis of MEQ scores, the participants were divided into three circadian rhythm types: evening type, intermediate type, and morning type. The results of the CAQ scores revealed that in general, the evening type tended to suffer from more problems related to time management and self-discipline than the other two types. The results of the ANOVA and the post-hoc comparison indicated that the evening type reported significantly higher values on these two scores than the other two groups. These results strongly suggested that eveningness or the delaying of the daily sleep schedule—that is, going to bed late and waking up late—is closely related to the problems related to time management and self-discipline.

Keywords: *eveningness, morningness, sleep, time management, self-discipline*

A comparison of United States military members and federal employees' experiences of discrimination and sexual harassment: The relationship between reporting style and satisfaction with the resolution

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While military and civilian Department of Defense (DoD) workers and federal employees are protected against various forms of discrimination and sexual harassment, these practices still occur. The Defense Equal Opportunity Management Institute Organizational Climate Survey (DEOCS) assesses an organization's climate associated with military equal opportunity (EO) and civilian equal employment opportunity (EEO) practices. The Federal Equal Opportunity Climate Survey (FEOCS), a modified version of the DEOCS, assesses federal agencies' organizational climate associated with EEO practices. Both surveys provide an opportunity for members to chronicle experiences of discrimination and sexual harassment, the actions they may have taken following the incident, and their satisfaction with how the issue was resolved. Both the United States (US) military and federal agencies train Equal Opportunity Advisors (EOAs) to aid in the resolution of organizational EO/EEO-related issues (for example, issues related to the experience of discrimination and sexual harassment). Ideally, members experiencing discrimination or sexual harassment will seek to rectify the situation through their EOA, since EOAs are formally trained in complaint resolution and mediation. Moreover, the EOAs' training should help the offended individual successfully resolve the issue. This study characterizes the relationship between actions taken by the victim after experiencing discrimination or sexual harassment, and their level of satisfaction with issue resolution. This study compares data from

over 4,000 (US) military members who completed the DEOCS and data from over 3,000 civilian federal employees who completed the FEOCS, examining demographic variables (for example, race, sex, and age) to gain an accurate depiction of the relationship between specific action taken and satisfaction between the groups. It is sensible to predict that, when victims report discrimination or sexual harassment through their EOA, they will be more satisfied with the issue's resolution, compared to those who take actions not involving an EOA. In a broad sense, these analyses will represent an attempt to gauge victims' trust in EOAs, and the EOAs' effectiveness resolving problems.

Keywords: *equal opportunities, organisational climate, discrimination, sexual harassment, Department of Defence*

A correlational study on private or public self-consciousness, self monitoring and coping style

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This study attempted to investigate the relationship between private and public self-consciousness, self monitoring and coping style. One hundred and ninety six Chinese middle school students (96 male, 100 female) were invited and asked to fill in Private Self-Consciousness Scale and Public Self-Consciousness Scale (Fenigstein, Scheier, & Buss, 1975), Self-Monitoring Scale (Mark Snyder, 1974), and Coping Style Scale (CSS, Xiao, 1994). CSS consist of six subscales: problem solution, self-abuse, help seeking, fantasy, withdrawal, and rationalization. Significant differences exist between male and female students on three coping styles: self-abuse ($F(1,194) = 4.507, p < .05$), withdraw ($F(1,194) = 5.80, p < .05$), and rationalization ($F(1,194) = 17.00, p < .001$). Significant differences were found between low- and high-private self-consciousness students on two coping styles: problem solution ($F(1,194) = 15.766, p < .001$), self-abuse ($F(1,194) = 4.986, p < .05$), help seeking ($F(1,194) = 4.986, p < .05$), and differences in help seeking tended to be significant ($F(1,194) = 3.879, p = .052$). Significant differences between low- and high-public self-consciousness students only exist on fantasy

coping style ($F(1,194) = 7.061, p < .001$). Between low- and high self-monitoring students, significant differences only existed on problem solution ($F(1,194) = 9.909, p < .01$) and tended to be significant on fantasy ($F(1,194) = 3.872, p = .052$). Significant correlations exist between public self-consciousness and fantasy, private self-consciousness and self-abuse, self-monitoring and help seeking. The conclusions drawn were that female students are more self abusive, withdrawn and rational, high-private self-consciousness students are more self abusive and problem solvers, high-public self-consciousness students use more fantasy, and high self-monitoring students are more problem solvers and help seeking.

Keywords: *private self-consciousness, public self-consciousness, self-monitoring, coping styles, students*

A criterion of social norm: Appropriateness of judgment as conflict resolution strategies

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In this study, we attempted to reveal how people would judge appropriateness of interpersonal behaviors. Shimizu and Kosugi (in print) proposed a hypothesis that people would judge appropriateness of behaviors based on the Pareto principle that people should select the situation in which the benefits for all members are higher than in alternative situations. Also, they predicted that this judgment could vary with social relationship between agents. Kelley and Thibaut (1978) suggested that there were two main types of conflict situation. One is the situation where the selections that maximize the benefit of individuals reduce the benefit of the group (e.g. PD game: PDG). And another is the situation where there are two selections that maximize the benefit of group though it is unfair (e.g. Battle of sex game: BSG). We assumed that people would judge appropriateness of social behavior based on the Pareto principle in order to avoid conflict in both situations (PDG, BSG). From those arguments, this study investigated how people would judge appropriateness of selection in both PDG and BSG, by using a scene assuming method. Two hundred and nineteen Japanese students at university participated in

this study. Participants were asked to assume two scenes (PDG and BSG) where two characters cooperated and performed a college report assignment. Relationships between the two characters were manipulated by closeness and hierarchy (close vs. not close, fifty-fifty vs. hierarchical). Participants then judged the appropriateness of characters' selections. In the results, participants generally judged appropriateness of behaviors not by the Equality and Economics principle but by the Pareto principle. This tendency was stronger for the close relationship than the not close relationship in both conflict situations. This finding indicates appropriateness judgment as a strategy to resolve conflict situations. In this study, we investigated only individual's judgment of appropriateness of social behavior. Therefore, we should investigate how people judge appropriateness based on consensual decision making.

Keywords: *social norm, conflict resolution, judgement appropriateness, interpersonal factors, consensual decision making*

A framework of global competence

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This study was intended to identify a variety of global competencies for Korean companies. First, based on literature review and current competency list for major global companies across the world, common global competencies were drawn. In addition, for one of the major global companies in Korea, we conducted semi-structured interviews with executives who had overseas experience, FGI with high performers, and individual interviews with managers who are working in overseas. A total of 29 individual interviews and three FGIs were conducted. Based on content analysis, a total of 17 global competencies were obtained. Definitions of each of the 17 global competencies were given to 140 high performers who had overseas experience and asked them to rate the importance of each of the competencies with 5-point Likert scale and also select top five important competencies with a rank order. The results showed that human network and negotiation were shown to

be the most important global competencies and acceptance of different culture, adaptation of different culture, and customer orientation were followed in order. To become global talented employees, relation-related competencies appear to be more important than task-related competencies.

Keywords: *global competence, Korea, culture, relation-related competencies, task-related competencies*

A method to the sadness: Understanding the methods used to commit suicide

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Death by suicide occurs more often in males than females. It remains unclear as to how strongly these gender differences are influenced by the method used in the suicidal act versus other factors affecting these desperate individuals. The present study explores gender differences in suicidal methods, aiming to identify patterns that could improve our identification and triage of individuals at risk for suicide. The present study examined all cases of suicidal death that occurred in Cuyahoga County Ohio between 1994 – 2008. During the 15 year span, 1,745 males and 477 females committed suicide. Each case was coded for age, race, gender, marital status, method used to commit suicide, and blood alcohol levels at the time of death. All data were collected through the coroner's office and coded for these demographic factors. Significant gender differences were observed in the method used to commit suicide ($c2(4) = 228.82, p < .001$), with males more often using gunshot wound to a vital organ (52.0%), and less often using asphyxiation (23.7%), carbon monoxide (7.3%), or drug overdose (6.8%). In contrast, females relied on a more diverse pattern of methods, including guns (29.8%), overdose (31.4%), asphyxiation (20.9%), and carbon monoxide (7.9%). Significant gender differences were observed in the marital status of the deceased ($c2(3) = 35.94, p < .001$). Among individuals who died by gunshot wounds, more females (45.1%) than males (38.3%) were single ($c2(3) = 8.13, p < .05$). Likewise, among individuals who died by

drug overdose, more females (23.3%) than males (52.9%) were single ($c2(3) = 29.89, p < .001$). Additional analyses will explore gender differences in suicidal methods, in relationship to age, race, and blood alcohol levels at the time of death. By examining patterns of suicidal methods, it may be possible to improve our understanding of suicide risk and strengthen efforts at the secondary prevention of suicide. Secondary prevention relies on the accurate assessment and early intervention of high risk groups. The present findings help to refine our understanding of gender differences in suicide risk, and may help to promote different prevention plans for males versus females.

Keywords: *suicide, gender, method, marital status, Ohio*

A preliminary study for adaptability assessment in career counseling: Contribution to the paradigm for career construction

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Adaptability is being one of the issues in focus in nowadays and specially in the context of the Life Design International Research Group. Coordinated by Mark Savickas, this Project has been formulating potentially innovative transnational measurements, namely the Career Adapt-Abilities Inventory. The life-design framework for counseling implements the constructivist approach addressing to who aim to help people develop their working lives (Savickas et. al., 2009). The present study aims to assess a measurement of adaptability construct for counseling setting. Supported by the Career Adapt-Abilities Inventory, a counseling version was developed, attending to what concerns adults and young adults during the career counseling. Thus, six items for each of the five adaptability "C's" were defined: concern, control, curiosity, confidence and commitment. This measurement was answered through email by 43 Psychology graduation students and recently graduated ones. The aim is to investigate if the items are or are not good indicators of adaptability assessment in counseling context. Therefore, reliability and validity analysis with this preliminary version are

provided and data presented. High reliability is illustrated through Cronbach's Alpha coefficients, with values between 0.72 and 0.82. Further analysis were carried out with the Hierarchical Cluster Analysis (Spearman Coefficient plus Complete Linkage model), the Rank Analysis and the Principal Component Analysis used on the similarity matrix obtained with the coefficient's LC. The results seem to support a major factor of adaptability and, on the other hand, some of the items need to be eliminated or revised (also corroborated by the Cronbach's Alpha if item deleted analysis). Given the globalization of career counseling, Life Design research is important since it addresses issues about adaptability and formulates potentially innovative responses (in terms of assessment and intervention) in an international forum. Considering data implications, next steps and research developments are discussed.

Keywords: *adaptation, Career Adapt-Abilities Inventory, career counselling, life-design framework, assessment*

A project of persuasive communication toward public transportation-oriented-residential choice

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Recently, it has been discussed that development of "compact city" where various types of urban facilities are highly densely would solve various types of traffic and environmental problems. Compact city would be formed if people choose their residential places in city center or near railway stations or bus stops where they do not have to use car. Therefore persuasive communication to induce people's residential choice in such places where car are not always necessary is a substantially-effective transportation measure to solve various types of urban transportation problems through developing compact city. The objective of this project is to develop a persuasive communication program to induce public-transport-oriented residential choice (PTOR choice) through field experiment. We implemented an experiment that targeted students in university of Tsukuba, Japan, who were about to change their flats. They were

randomly assigned into four groups; the first group was a control group, the second group was provided with information brochure about flats that has been commonly used in Tsukuba city, the third group was provided with a brochure that is identical with one for the second group except for a point that information about level of bus service for every flat was added, and the fourth group was provided with a leaflet to motivate PTOR choice in addition to the brochure used for the third group. Residential places were investigated 5 month after the interventions, and we found that no difference of PTOR choice between the control and the second group but significant difference between the control and the third group, and the control and the fourth group. It was shown in the result that just information about level of bus service for every flat can induce PTOR choice, and the ratio of PTOR choice in the group with the information was twice as high as the control group. The persuasive message to induce PTOR choice was also found to contribute to increase PTOR choice. These results imply that simple intervention, that is, inclusion of information about level of bus service for every flat can effectively induce PTOR choice, that is necessary for development of compact city, and explicit persuasive message was also effective. Since the cost of these interventions was limited, this can be easily implemented in any universities, any workplaces, and house agent offices. Since PTOR choice would lead less car use, this proposed communicative intervention could be regarded as substantially effective transportation measure.

Keywords: *compact city, persuasive communication, transport, communication*

A relationship between perceived apathy and mental health among Japanese university students

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Apathy felt by healthy individuals has been studied from the perspective of depression without empirical research. However, Osanai (2009) coined and classified the term "perceived apathy" to refer to the apathy subjectively felt by healthy individuals. The aim of this study was

to find out the relationship between perceived apathy (Domain-General Apathy: DGA and Domain-Specific Apathy: DSA) and mental health (depressive tendency) among healthy university students. Participants were 215 Japanese university students (110 male, 105 female). To measure DGA, "Method of measurement for subjective strength of perceived apathy with single item: MSPS" was used. To measure DSA, the 10 items for the DSA of Japanese university students developed by Osanai (2009) were used. To measure depressive tendencies, "The Depression and Anxiety Mood Scale" developed by Fukui (1997) was used. Results indicated that there was a significant correlation between DGA and depressive tendencies ($r = .516, p < .001$). In addition, there was a significant correlation between the DSA item "self-improvement lectures (such as language schools etc.)" and depressive tendencies ($r = .140, p < .05$). To conclude, DGA was correlated with depressive tendency. However, DSA items were not correlated with depressive tendency. These results suggest that DGA represents a kind of symptom of depression but DSA does not.

Keywords: *perceived apathy, mental health, depression, university students, Japan*

A review on research and task in "ibasho"

NAOTO, Y. (Chuo University)

"Ibasho"(existential place) is the word with the physical meaning called "the place where a person is", but "ibasho" comes to be used in a meaning including the psychological condition when I am in the place such as "the place that can be relieved" recently. The study about "ibasho" came to be performed flourishingly from 1990's. However, it is the present conditions that various studies are performed because there is not yet the definition of an established "ibasho". The purpose of this study was to review previous studies on "ibasho" from 1990 and point out the task in the study of "ibasho" for making "ibasho". In the Scholarly and Academic Information Navigator (CiNii) of the National Institute of Informatics, I searched documents from 1990 to 2008 in keyword called "ibasho" and the object documents were an

available article and a book about the "ibasho". I took 43 studies as an object of this study. Based on the review, the six tasks in the study of "ibasho" were pointed out. The first point is introduction of a viewpoint capturing the individuals has the whole of "ibasho". The second point is to use the definition to express an actual "ibasho". The third point is to clarify "ibasho" and its connection with the school refusal. The fourth point is to have to examine in detail about a relationship with another person and "ibasho" and "ibasho" without other people. The fifth point is examination of the making of "ibasho". The sixth point is to clarify which psychological function of "ibasho" it is got in what kind of "ibasho". It was suggested that a meaning is really connected for the making of "ibasho" for children because a study is accumulated about these points.

Keywords: *Ibasho, existential place, children*

A study defining HASL life insurance index and analyzing its Influence on insurance intention of consumers

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The aim of this paper is to explore main cognizing factors which may influence consumer's insurance purchasing intention, analyze deeply the cognitive level and need types about insurance life of consumers, and study the relation between them. This study utilized The Questionnaire of HASL Life Insurance Index which was designed by ourselves, and investigated 5802 consumers of 12 cities in P.R. China. By exploratory factor analysis, six key factors were found to influence consumer's purchasing desire, such as Professional Advice Recognition, Industry Impression, Risks Perception, Concerning the Society, Financial Prospect, Relationship between Caring and Insurance, etc. By correlation analysis, there is significant correlation between insurance purchasing intention and six-Cognitive Factors of consumers. By T-test, there is significant difference between high and low of 6-Cognitive Factors about their insurance purchasing intention. By multiple regression analysis, this

study established a HASL life insurance forecast model that contained nine variables. There are three conclusions can be obtained from this study: Firstly, the Questionnaire of HASL Life Insurance Index has good reliability and validity, which may be used as the standardized tool to measure consumer's insurance cognition level. Secondly, six factors in HASL Life Insurance Index, such as Professional Advice Recognition, Industry Impression, Risks Perception, Concerning the Society, Financial Prospect, have significant influence to insurance purchasing intention of consumers. Thirdly, there are nine variables which can be to used to forecast insurance purchasing intention of consumers, such as education of high middle school, 40 000 to 150 000 salary one year, school types, Professional Advice Recognition, Industry Impression, Risks Perception, Concerning the Society, Financial Prospect, etc., which have 33.8% forecast power.

Keywords: insurance purchasing intention, HASL life insurance forecast model, cognition, risk perception, education

A study of community informatization activities building wireless community networks in England and Germany

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The activity of Wireless Community Networks is one of the grass root informatization activities to bridge the digital divide in local communities, by using wireless LAN techniques. The most significant feature of Wireless Community Networks is that the network is community-owned and community-run by volunteers. The aim of this study is to understand the current state of, and problems in, managing Wireless Community Networks in England and Germany. A case study of five Wireless Community Networks in England and Germany was conducted. Semi-structured interviews were used for the founders or core members of these Wireless Community Networks. Interviews were taped and transcribed. The transcription was analyzed by constant comparative methodology. The case study of five Wireless Community Networks in England and Germany showed that Wireless Community Networks were playing an important role in solving the digital divide issue

in local communities, especially in deprived areas. Open-source movement, which is a movement to share the source code and the benefit of free computer software with each other, helped voluntary members of Wireless Community Networks by supplying useful technical information and support. Furthermore Wireless Community Networks can empower people who are suffering from social exclusion by providing them with opportunities to own low cost internet access at their home and sufficient training to make the most use of it. The results of the study suggest that a project of Wireless Community Networks can be carried out with low cost, therefore, it can be also useful for local informatization activities in developing countries.

Keywords: wireless community networks, community, digital divide, informatization, case study

A study of difficult cases for school counselor – focusing on how to work with parents

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Previously, several case studies about relationships between parental and child change have been reported, however, most of these studies focused mainly on successful cases, not difficult cases. In this research two studies were conducted. The purpose of the first study was to clarify difficulties of school counselors and how to deal with those difficulties. The second study was to explore difficulties of school counselors when they work with parents. Prior to these studies, a questionnaire was sent out to approximately 70 school counselors, to find out whether they have had difficult cases and how they feel about those difficulties. Based on the results of the questionnaire, the first study consisted of semi-structured interviews conducted with 5 participants that have or have had experience as school counselors. In the second study, the semi-structured interviews were conducted with 9 participants. The data of both studies was analyzed by qualitative analysis, using the KJ method originating in Japan. In these studies, a course of how difficulties experienced by school counselors were created was indicated. Several factors

were found that might influence the difficulties of the school counselors. Such factors included the motivation in parents or the ability to actually care for the child, a teacher's lack of energy or the inability to connect with the child because of past experiences, school counselors themselves, and relationships of the people surrounding children with issues. In addition, a new concept, "relationship-connector", was found. This indicated a function of school counselors as a modifier of relationships and an adjuster of roles for the people surrounding the children. In conclusion, difficulties of school counselors were related to how the relationships of the people surrounding the children were developed. To work effectively as a school counselor, it might be significant to take the role as "relationship-connector", which not only enhances the relationship between the people surrounding the children with issues, but also establishes partnerships among them. Furthermore, school counselors need more training and appropriate supervision to grow as a profession.

Keywords: *school counselors, difficult cases, working with parents, children, relationship-connector*

A study of implicit knowledge of creativity in China

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This research investigated the implicit knowledge of creativity in China. One hundred and twenty eight Chinese (63 men and 65 women) completed open-ended questionnaires on two questions. The two questions were "what do you think are the characteristics and behaviors of creative people?", and "who are the most creative people in China?" The results showed that, firstly, Chinese people in general have positive perceptions of the concept of creativity. "Smart" was listed as the most salient characteristic of creativity. This means that intelligence counts most in Chinese implicit knowledge of creativity. The traits of "positivity", "daring", "having lot of ideas", "kind", "having lots of knowledge" "original", "weird", "imaginative", and "active" made up the ten

most cited characteristics. Males and females had almost same implicit knowledge of creativity, but differences were found between generations, with new generations expressing more negative factors. Regarding the second question, artists/entertainers and politicians were nominated as the most creative in the list followed by scientists/inventors, businessmen, writers, and philosophers/educators. Artists/entertainers were nominated mostly by the new generation and politicians were nominated mostly by the older generation. It seems that with the increasing interaction with Western countries via international events such as the Beijing Olympics, Chinese people are naturally exposed to the concept of creativity..

Keywords: *creativity, implicit knowledge, creative people, characteristics of creative people, China*

A study of the relationship between happiness and creativity among girl high school students in Karaj

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The purpose of this investigation is to determine the correlation between happiness and creativity among girl high-school students in Karaj. The sample in this study consisted of 400 girl, high-school students, who were chosen by a multiple phase cluster random sampling procedure. Two inventories were used: The Oxford Happiness Inventory (Revised Text, 2001) and the Abedi Creativity Inventory (1993). The findings suggest that happiness can predict creativity and its components, both significantly and positively ($p < 0.001$). To conclude, the final results confirmed research hypotheses and the effect of happiness on creativity and its components.

Keywords: *happiness, creativity, high-school, females*

A study on career decision-making strategies among Chinese college students under competition pressures

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Nowadays, college students are facing great pressures during their job-search process in China. In a society where the number of job applicants is much higher than the job opportunities, competition is one of the major pressures. We are therefore interested in the strategies that students use to find a job in such conditions, and to better understand the job-searching behaviors among Chinese graduating students. In this ongoing study, based on the framework of stress and coping (Folkman & Lazarus, 1985), we will explore students' career decision-making strategies under diverse levels of competition pressures in China. Three hundred participants have been recruited from various college levels in Beijing, China, and asked to complete a package of inventories to assess the levels of perceived competition pressures, career decision-making strategies (comprising of rational, intuitive, and dependent factors (Harren, 1979)), as well as demographic variables. First, independent sample-t test and ANOVA will be conducted to examine the differences of perceived competition pressures and career decision-making strategies between gender groups, as well as various major groups. Partial correlation analyses will be conducted to explore the relationship between competition pressures and career decision-making strategies after controlling for gender and major variables. The results and conclusions will be presented at the conference. Moreover, the implications and limitations of the study will be discussed.

Keywords: *career, decision making, competition pressures, college students, stress coping*

A study on development and effect of rating scale for hospitality

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The purpose of this study was to develop a rating scale for hospitality, and to measure its effect. The term "hospitality" resembles emotional labor including the understandings of emotion. In Japan, three concepts of hospitality are generally defined as "Mekubari", "Kikubari", and "Kokorokubari." Mekubari is to keep a careful watch. Kikubari is to consider other's feelings. Kokorokubari is to give consideration for other people. Two hundred and seventy nine

female subjects, who were women's university students, participated in a survey questionnaire. The questionnaire consisted of 73 items in a preliminary research stage. After deleting items as a ceiling and floor effect, we conducted a factor analysis. The results of factor analysis showed that 3 factors existed in hospitality. The factors of hospitality were named "cognitive dimension", "emotional dimension", and "behavioral dimension." In addition, we investigated the validity of the rating scale for hospitality in correlation among "Perspective" in multi-dimensional empathy scale, "Emotional Warmth" in emotional empathy scale, and prosocial behavior scale. Three factors were positively correlated with them. Accordingly the validity of our scale was confirmed. Moreover, we developed a screening test of hospitality, which each consisted of 3 items in cognitive, emotional, and behavioral dimensions. We concluded that we could measure differences among individuals for hospitality.

Keywords: *hospitality, rating scale, cognitive dimension, emotional dimension, behavioral dimension*

A study on the factors influencing mental resilience and social adaptiveness

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Interpersonal trust in individuals is associated with their social adaptiveness and is said to have an effect on mental health. To deal with negative feelings, mental resilience is also needed. This study examines the relationship between confidence, mental resilience, and stress coping, and clarifies the factors that are closely linked with social adaptiveness. These factors contribute to enhancing mental resilience, which may be particularly beneficial to young adolescents in Japan, who tend to be less adaptive to the environment. A questionnaire survey was conducted among 98 female college students (mean age 20.1) by asking 75 items: confidence scale, mental resilience scale, stress management scale, negative event scale, etc. The mental resilience

was evidently higher in those having higher confidence in oneself and others than those having lower confidence, when analyzed in two separate groups. After reviewing the correlation between confidence and stress coping, those with high confidence could recognize things positively and distract themselves adaptively, while those with low confidence were inclined to avoid confronting the problems. Therefore, to develop confidence in oneself and others strengthens mental resilience. Also, stress management is found to be one of the important deciding factors for adapting oneself to circumstances healthily as well as to keep one's mental conditions normal.

Keywords: *mental resilience, social adaptiveness, adolescents, Japan*

A study on the influence of emotionality of temperament on self-esteem in 3 to 5 year old children

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This research studied the influence of emotionality of temperament on self-esteem in 3 to 5 year old children. The sample consisted of randomly selected 90 children aged from 3 to 5 who come from a normal kindergarten. The research used a questionnaire and the experimental method, using Physical Polytrophic Recording to measure the different physiological dates of different self-esteem. The results indicated that: there is a close relation between 3 to 5 year-old children's temperament and self-esteem. Emotionality has a significant negative correlation with self-esteem. Significant differences existed in different levels of self-esteem. The regression shows that the emotionality of temperament influences levels of self-esteem.

Keywords: *temperament, emotionality, self-esteem, influence*

A study on the learning process of psychological assessment techniques

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It is profitable for students who are trained on psychological assessment techniques to begin with their own experience as "testee". "Testee experience" brings them empathic understanding of the clients' situation, higher motivation for practice, knowledge of a clinical psychologist on-the-job, and so on (Morita and Nakahara, 2004). The purpose of this study is to demonstrate the significance of "testee experience" from the viewpoint of clinical psychologists who undertake the test for students. The authors have introduced "testee experience" into a practice class of the Rorschach test at the university. 55 certified clinical psychologists have participated as a tester from 1998 to 2004, and 47 testers answered a questionnaire about "testee experience for students". The questionnaire consisted of the following issues: 1) tester's age, gender, number of times that he/she has undertaken the Rorschach test on students; 2) What and how students learn through testee experience? ; 3) Which is an important aspect of testee experience?; and 4) What was a tester concerned about at test administration? Testers were divided into 2 groups based on their age. Group 1 includes 24 testers under 40 years old, and group 2 includes 23 testers over 40 years old. In group 1, all testers except one had their own testee experience. While in group 2, only one tester had taken the test administered by an expert. As the results of the comparison between the 2 groups show, more testers in group 1 focused on "how does a non-patient respond to the ink-blot?", "how properly can the tester administer the test?", and "how does each student behave toward tester and test situation?" Regardless of age and past experience, majority of testers considered that it is important for students to learn the "inner experience of clients" and "arising process of Rorschach response" from their testee experience. As the results of this study show, the significance of "testee experience" was revealed. Senior clinical psychologists tend to focus on how students understand the inner experience of clients or patients. These results might be important for education and training of psychological assessment techniques in clinical psychology classes.

Keywords: *testee experience, training, psychological assessment, Rorschach test*

A survey investigating post-incident debriefing and psychological wellbeing in emergency service personnel

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Emergency service workers are commonly exposed to traumatic events that may affect their psychological wellbeing. In an attempt to protect them against PTSD, many personnel are required to attend debriefing sessions following exposure to traumatic events. Critical Incident Stress Debriefing (CISD) is the most common form of post-incident debriefing employed both within Australia and around the world. However, there is little evidence concerning the efficacy of CISD. The aim of this research was to explore current debriefing practices within the NSW Fire Brigades and investigate the knowledge, attitudes and opinions of the employees to these practices. In order to do this we surveyed a stratified sample of firefighters from the NSW Fire Brigades about (a) the prevalence and nature of exposure to traumatic events, (b) levels of stress reactions, (c) coping strategies, and (d) attitudes to current stress management strategies. The results from the survey indicated that firefighters are exposed to a range of stressful situations and that they use a variety of different coping mechanisms to help deal with the stress that they experience. Some firefighters were happy with the current debriefing processes, while others recommended changes, such as varying the debriefing strategy to suit the individual's specific needs. The results of this survey will inform the development of new post-trauma interventions designed to meet individual needs. Findings from this research have important implications for emergency service organisations throughout the world.

Keywords: *debriefing, stress, coping, trauma, interventions*

Academic contingency of self-worth and academic achievement in Japanese young adolescents

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This study examines how Japanese young adolescents are affected by their academically based self-worth. Academic contingency of self-worth (ACSW) represents the degree to which one stakes one's self-worth on academic achievement. The past studies on this subject generally focused on the negative effects of pursuing self-worth on academics, yet the researchers have not reached clear conclusions. While Park, Crocker & Kiefer (2007) have demonstrated that ACSW was detrimental in the cases of academic failure in college students, other studies indicated that ACSW played a key role as motivation for academic success in young adolescents (Osborne, 1995). The present study examined ACSW's effects on academic achievement during one academic semester by conducting 3 successive questionnaire surveys. One hundred and twenty eight junior high school math students participated in the study. The first questionnaire was given to students one week before their mid-term exam and assessed their ACSW, trait self-esteem, pre-test motivation and expectation for the mid-term exam performance. Feedback from the mid-term exam was given to each student, which was then immediately followed by the second questionnaire assessing state self-esteem. The third questionnaire was given one week after the final exam and assessed post-test motivation. Students were divided into 2 groups (success or failure) according to the mid-term results. In the failure group, high ACSW students showed vulnerability as evidenced by a significant drop in state self-esteem. This negative effect was not as significant in low ACSW students in the same group. In addition, ACSW in the failure group did not appear to have a significant effect on post-test motivation as well as the final exam. On the other hand, in the success group, students with high ACSW predicted higher post-test motivation and final exam grade than those with low ACSW. While other studies on the effects of ACSW have shown similar drops in self-esteem for students who experience failure, this study indicates a significant boost in motivation for students who have succeeded academically. Future research should be aimed at identifying the educational

condition on which the effects of ACSW are more beneficial for effective motivation.

Keywords: *academic achievement, self-worth, adolescents, academic contingency of self-worth, students*

Accommodation motivation moderates group-level dissonance

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Group dissonance describes a state of psychological discomfort that arises from an interpersonal source (e.g., an individual holding a position discrepant from that of the group). Recent research has shown that group-level dissonance reduction may explain conformity in small group settings (Matz & Wood, 2005). The present research shows that the motivation to accommodate may moderate group-level dissonance, such that only accommodation-motivated individuals, probably due to a strong desire to align personal and group opinions, would experience group dissonance. In Study 1, we validated a newly developed individual difference measure of accommodation motivation (AMS) and used a scenario to test the relationship-specificity hypothesis: only micro-accommodation motivation should predict yielding to people in the micro-environment (e.g., close friends) and only macro-accommodation motivation should predict yielding to people in the macro-environment (e.g., a student group in the university). In Study 2, participants first filled out the AMS. Next, they indicated their position on several social issues in preparation for participating in an alleged group discussion. The experimental setup allowed them to know prior to the discussion whether the group members agreed or disagreed with them. They were required to engage in discussion of the selected issue only, with the group trying to reach consensus at the end. Finally, they completed a dissonance discomfort measure and indicated the position on the chosen issue they expected themselves to take in the pending discussion. In Study 1, we found evidence for the psychometric properties of the AMS. Further, results showed that micro-accommodation predicts yielding to the

influence of a close friend, whereas macro-accommodation predicts yielding to a pressure group in one's institution. Study 2 showed that accommodation motivation predicted higher likelihood of opinion shift and greater intensity of dissonance discomfort when participants were exposed to disagreeing others in a group discussion setting with low situational demand for conformity (when they needed to discuss only). This research extends previous literature by identifying accommodation motivation as another individual difference moderator of group-level dissonance. The idea that people may willingly accommodate to others' concerns and preferences challenges the entrenched assumption that accommodation always undermines autonomy.

Keywords: *group-level dissonance, accommodation motivation, individual difference measure, opinion shift, dissonance discomfort*

Acculturation strategies at educational work

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Every day, organizations become more competitive and culturally diverse which necessitates the development of new skills. The present study analysed the role of cultural regulatory and dispositional variables such as self-efficacy, leadership and cultural intelligence, to determine acculturation strategies across four experimental scenarios created with fictitious newspaper articles. Six hundred and thirty eight teachers (120 from Venezuela, 80 from Portugal and 438 from Spain) participated in this study (Mean= 37.20 years old; *SD*=9.95). 34.2% were males and 65.8% females. Cultural Intelligence consisted of 20 items to assess personal ability to adapt successfully to different cultures ($\alpha=.91$) in a 5-point Likert scale. Cultural Self-efficacy consisted of 25 items (5-point Likert scale) allocated in 5 factors. Positive and negative affect composed of 20 items with a 5-point Likert scale, 10 items analyzed positive affect ($\alpha=.87$; e.g., interested) and 10 items analyzed negative affect ($\alpha=.86$; e.g., sad). Cultural Leadership consisted of 10 items (5-point Likert

scale; $a=.80$). The results showed interactions between three regulatory variables and ethno-cultural origin within an ANOVA. Cultural self-efficacy played a main effect on the acculturation strategies adopted. Teachers from Venezuela, Portugal and Spain show different cultural self-regulatory mechanisms, probably because of their different immigration processes. Teachers in Dual Identity Scenarios feel more identity with acculturation strategy followed by immigrant students, more positive effect, less negative effect, and a more task-oriented leadership than teachers in other scenarios. Cultural self-efficacy, cultural intelligence, positive effect, and cultural leadership, as self-regulatory variables, were shown to be related to how teachers identify the acculturation strategy followed by an immigrant student. This is important, especially in marginal identity situations, where teachers should put into practice their skills to cope with cultural diversity. Since a dual identity is linked with a better psychological and sociocultural adaptation, we consider that empowering self-regulatory variables (cultural intelligence, cultural self-efficacy, cultural leadership, and positive affect of teachers), could influence the adaptation of immigrant students, because they would feel more oriented and supported to develop a dual identity.

Keywords: *acculturation strategies, cultural intelligence, leadership, self-efficacy, teachers*

Achievement of outcomes is not necessarily prioritized in children's' imitation of gestures

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A central idea in the study of imitation behaviors in children is that imitation is goal-directed. That is, in a process of imitation-specific goal selection, achieving an outcome (e.g. push a switch) takes priority over correctly copying the actions (effector or movement path) necessary to achieve that outcome. This study challenges the validity of this theory by directing children to systematically imitate a more complex action model and investigates the factors that affect the occurrence of error responses. 32 children

(M: 5 years 11 months; age range: 5 years 2 months to 6 years 10 months) were instructed to imitate an action model that systematically combined three elements: effector (left and/or right hand), movement path (left and/or right side), and object (ear and/or shoulder), so that there were 20 variations of touching the right and/or left hand(s) to the left and/or right ear(s) and/or shoulder(s). Actions and imitation responses were collated by element. Elements that did not match were considered error responses. The K-ABC (Kaufman Assessment Battery for Children) was administered after completion of the imitation tasks to measure hand movement and spatial memory. Friedman test results showed that error responses varied by element ($\chi^2 = 27.32, p < .01$) and post hoc comparisons (Wilcoxon test) indicated that there were more errors for movement path than object ($z = -3.02, p < .01$) and for object than effector ($z = -2.72, p < .01$). Multiple regression analysis showed that error responses were not predicted by the factors of age, hand movement, or spatial memory. To conclude, the data show that the number of error responses varied by element, and the finding that there were less error responses for effector than for object does not support a goal-directed theory of imitation. This corroborates recent studies that state that error response patterns depend on the characteristics of the task to be imitated. The data also indicates that age, hand movement, and spatial memory skills are not closely related to the type of imitation task in this study.

Keywords: *imitation behaviours, children, goal setting, task characteristics*

Adaptation of job survey among French firefighters

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The aims of the current study were: i) to adapt an on the Job Stress Survey assessing the perceived stress among French Firefighters, where the organizational pressure will be considered; and ii) to study the relationship between these components and the symptoms

of three-dimensional BO as envisaged in the Maslach Burnout Inventory. In the current study, 383 firefighters have so far completed the following questionnaires: the "Job Stress Survey" adapted to firefighters (SP-ESP; Marien, Auvert & Michel, 2009) The Maslach Burnout Inventory French version (MBI; Dion & Teissier, 1994). Exploratory Factor Analysis with the method of unweighted least squares (AFE) with promax rotation was allowed to retain 26 items on the 53 original items in the scale frequency and intensity. Among these items, 20 are sub-scale "Organizational Pressure" and 6 "operational work". Each of the scales and subscales has satisfactory internal consistency with Cronbach's alpha ranging from 0.8 to 0.9. Confirmatory factor analysis (CFA) verifies the reliability of psychometric tool. The correlational analysis had highlighted from this tool links between perceived stress and symptoms of BO. In addition to presenting satisfactory psychometric qualities, the scale relevant to the job of firefighters can identify the stress factors specific to this work. Thus, through it, understanding the etiology of BO is favored because it respects the environmental constraints. This gives the opportunity to implement prevention programs or intervention respecting both the complexity of the work environment that individual's perception.

Keywords: *job stress survey, firefighters, organizational pressure, work environment*

Adolescent male depression: Attachment and the importance of peer support

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This project examined the influence of perceived peer and parental support on male adolescent wellbeing. It also aimed to investigate a possible age-related effect in the influence of perceived peer support on adolescent depression and two personality factors found to influence depression, namely Certain Self-Identity and Sense of Belonging. It was expected that perceived peer support would have a negative relationship with adolescent depression. Perceived peer support was expected to influence adolescent depression via a positive relationship with the personality factors. Both

Certain Self-Identity and Sense of Belonging were expected to have a negative relationship with depression. Participants were 129 year 7 and 130 year 10 male students from a private boys' school in regional Victoria, Australia. Participants completed an anonymous questionnaire including scales from the Mood and Anxiety Symptoms Questionnaire (Watson & Clark, 1991), to measure anhedonic depression; the Adolescent Personality Instrument (Thomas, 2005), to measure the personality constructs: Certain Self-Identity and Sense of Belonging; the Child and Adolescent Social Support Scale (Malecki, Demaray & Elliott, 2000), to measure perceived support from teachers; and the Parental Bonding Instrument (Parker, Tupling & Brown, 1979), to measure attachment to and support from mothers and fathers. Year 7 and Year 10 data sets were analysed separately via path analysis. One model included Certain Self-Identity in the pathway from support to depression; a second model used Sense of Belonging in the pathway to depression. Results indicate that peer support is more important to wellbeing in younger male adolescents. Contrary to what was expected, mothering exerts a significant effect on both Year 7 and Year 10 male adolescents. Mothering has important influences on Certain Self Identity for male adolescents. Peer support exerted some influence on the personality variables Certain Self Identity and Sense of Belonging, which were negatively correlated with depression. The effects of all risk factors, excluding fathering, were strongest on the younger adolescents. This is in contrast to results found by Jelley (2005) using an all female sample.

Keywords: *adolescent male depression, attachment, peer support, parental support, depression*

Adolescents' beliefs about the legitimacy of parental authority and their obedience: The moderating effect of parent-adolescent relationships

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Based on the Domain-Specific Model of Social Cognitive Knowledge, this study investigated the moderating effect of father-child and mother-child relationships on the relationship between

adolescents' beliefs about the legitimacy of parental authority, their own obligation to obey and their obedience in different social domains. Participants were fifth graders ($N = 201$), seventh graders ($N = 244$), and tenth graders ($N = 249$) from Northwestern area of Taiwan (Total $N = 694$; Boys, $N = 359$). They were asked to complete the questionnaires including Parental Authority Questionnaire (Liu, 2009) and Parent-Adolescent Relationship – Father vs. Mother Version (Gongla & Thompson, 1987). Repeated-measures analysis of variance and hierarchical linear regression were used to analyze the data. The results of ANOVA indicated that the younger the adolescents, the more reasonably they believed parents have legitimate authority, and the greater degree of their obedience. There was no gender difference on the beliefs about legitimate authority, although girls were more likely to obey the authority than boys. Adolescents agreed mostly that parents have authority on prudential and conventional issues, but agreed least on friend issues. Moreover, the results of regression analysis indicated that beliefs about the legitimate authority and obligation to obey significantly predicted adolescents' obedience and explained the major variance of obedience regardless of the domains. Father-child vs. mother-child relationship both predicted adolescents' obedience in the academic domain; father-child relationship uniquely predicted adolescents' obedience in the multifaceted domain; mother-child relationships uniquely predicted adolescents' obedience in moral and conventional domains. There were interaction effects between mother-child relationships and beliefs about the legitimate authority on conventional, moral, prudential, friend and personal domains, and between father-children relationship and academic domains. This study found that adolescent beliefs about legitimate authority and obedience decreased with increasing age. Beliefs about legitimate authority and obligation to obey mainly explained obedience. Adolescents' relationships with fathers and mothers moderated the relations between beliefs about legitimate authority and their obedience in different domains.

Keywords: *adolescents, parental authority, obedience, parent-adolescent relationship, authority*

Adult attachment, coping style and job burnout among Chinese maritime rescuers

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The aim of this study was to explore effects of adult attachment and coping style on job burnout in Chinese maritime rescuer. Two hundred and eighty maritime rescuers from east China were administered with a series of questionnaires, including Experiences of Close Relationship Inventory (ECR, Brennan, et al., 1998) for measuring adult attachment, Chinese Coping Style Scale (Shi, et al., 2002), and Maslach Burnout Inventory-General Survey (MBI-GS, 1997) for measuring job burnout. The results suggest that attachment avoidance is significantly related to three indices of job burnout, and attachment anxiety has positive correlations only with "emotional exhaustion" and "depersonalization". With regard to coping style, "denying the problems and mental disengagement" and "avoiding the problems and shifting attention" had negative correlations with three indices of job burnout, while "active coping focused on the problems" were correlated to "depersonalization" and "reduced personal accomplishment". Attachment avoidance was significantly related to coping style, while attachment anxiety was only related to "denying the problems and mental disengagement" and "avoiding the problems and shifting attention". Hierarchical regression analysis showed that coping style had a moderate effect between adult attachment and job burnout. Maritime rescuers' job burnout can be predicted by their attachment orientation and coping style. Furthermore, coping style plays a moderate role between adult attachment and job burnout.

Keywords: *adult attachment, coping styles, job burnout, Chinese maritime rescuers, attachment avoidance*

Affective and psychophysiological assessment of anti-gay and anti-lesbian bias in a sample of Brazilian citizens

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The aim of this study was to explore the effects of sex, sexual orientation and declared social distance toward gays and lesbians by the analysis of self-report affective ratings and physiological responses to homosexual and heterosexual visual stimuli. Thirty nine Brazilian young adults [18 males (9 homosexuals/bisexuals); 21 females (11 homosexuals/bisexuals)] were recruited for individual sessions. Each subject viewed a set of 40 standardized pictures [8 depicted heterosexual (HT), 4 gay (G) and 4 lesbian (L) couples]. During the visualization of each picture, physiological measures (skin conductance, peripheral temperature, corrugator and zygomatic electromyography activity) were recorded, and the subjects rated each picture in the dimensions of valence, arousal and dominance. The affective ratings and physiological scores were compared between groups by ANOVA and Kruskal-Wallis tests (level of significance: 5%). G and L stimuli received lower ratings of pleasure than HT from the heterosexual sample, whereas the homosexuals/bisexuals rated all the sexual stimuli as equally pleasing [$F(2,615)=62.15$]. Men were more sexually biased against G, whereas women were nonspecific in the ratings of G and L [$F(2,615)=4.78$]. L stimuli were rated as highly arousing and elicited greater galvanic responses and zygomatic muscle activity in male heterosexuals compared to homosexuals/bisexuals. Lower ratings of dominance were given by the heterosexuals when viewing G, and homosexuals/bisexuals when viewing HT stimuli, specifically [$F(2,614)=23.04$]. The group who declared social distance toward gays and lesbians evaluated more negatively L and G, but also HT stimuli, when compared to non-biased heterosexuals [Kruskal-Wallis $H(2,311)=7.48$ for valence]. Negative evaluations of L and G stimuli were detected only in the heterosexual sample, and were more negative for heterosexuals who reported a level of social distance toward gays and lesbians. Anti-gay bias was more salient and specific in male heterosexuals, whereas the females tended to show a slight and nonspecific

bias toward homosexuality. The positive ratings of L stimuli suggest the eroticization of lesbians by heterosexual men. The dominance dimension showed specificity for sexual orientation and suggests that homophobic attitudes may be associated with low-dominance emotions (e.g. fear), giving support to the defensive nature of homophobia.

Keywords: *gay, lesbian, homosexual bias, sexual orientation, homophobia*

Airmanship and seamanship: Can one model encompass both professions?

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Airmanship and seamanship are frequently used terms within their respective domains yet there appears to be no real consensus on a universal definition, nor any empirical research supporting their usage. This research aims to compare the views of experts in each field with the theoretical model of airmanship developed by Kern (1997). Based on discussion among pilots in the USA, the model's applicability in an Australian aviation environment and its relevance to seamanship were of interest, along with the experts' views on the development of exemplary airmanship and seamanship. Twelve Australian experts from the aviation and maritime industries were interviewed, five from the aviation industry, five marine pilots and two marine consultants. Mean years of experience among the aviation experts was 34.1 years, and 33.9 years for the marine experts. The transcripts were analysed on paper and by using NVivo8, extracting themes and concepts raised in discussion, with an initial structure based on the Kern model. The concepts of airmanship and seamanship were found to encompass a much more complex array of skills and attributes than are expressed by existing definitions. Most of the major themes identified by the expert aviators as essential in the understanding of airmanship were also discussed by the mariners as vital aspects of seamanship. These were also aligned with the framework of the Kern model of airmanship (Kern, 1997), with some elaborations and additions. Aviation experts more readily discussed human factors issues than marine

experts, who placed more emphasis on technical skills and mentioned more concepts related to physical aspects of marine activity. Both groups emphasised safety. Experience and appropriate guidance were considered to be the central factors in the development of airmanship or seamanship, however personal predisposition was also seen as necessary to develop to a superior level. While the Kern model supports the basics of good airmanship and seamanship, some elaboration is required for a comprehensive description, and some differentiation between the two terms is needed. Finally, training programs need to incorporate specific human factor components that relate to airmanship and seamanship to facilitate the development of exemplary professionalism.

Keywords: *airmanship, seamanship, aviation, maritime, safety*

Alcohol, monotonous and urban simulated driving

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Epidemiological studies have shown that alcohol is a major cause of mortal accidents, in particular at night and on weekends, and that the risk of accidents is directly linked to the level of alcohol in the blood. As there is lack of behavioral measures that can be used to define a dangerous threshold for driving after taking licit or illicit drugs, we conducted an alcohol calibration study and simulated different driving scenarios. The objective was to obtain references for impaired behavior in different driving situations. Sixteen participants, aged from 21 to 30 years, took part in the experiment. The participants sat in an interactive driving station (fixed base, 150° W * 49° H), drinking a beverage to obtain 0, 0.3, 0.5, or 0.8g of alcohol per litre of blood (BAC). They were then submitted to monotonous situations where they had to keep a constant speed (110km/h) and a stable position on the lane, and urban situations with scenarios of accidents where they had to drive at 50km/h. The number of collisions and different driving parameters were analyzed as a function of BAC. In monotonous following situations, SDLPs (a variable well known to be

sensitive to drugs or fatigue) increased as a function of the degree of blood alcohol concentration, and were significantly higher with 0.8g/l than with a placebo. In urban situations, the number of collisions increased with the level of alcohol but participants' responses times did not vary from one experimental session to another. Monotonous driving was significantly deteriorated by alcohol but results are not as clear with urban situations. However, participants were trained to the urban scenarios before the experiment in order to avoid any learning effect; urban scenarios were thus not as unexpected as in natural driving. Such results could be very useful to evaluate and quantify the degree of impairment caused by others factors.

Keywords: *alcohol, drugs, simulated driving, motor accidents, impaired behavior*

An analysis of the interpersonal relationships of bank managers in Bangalore-India

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The main objective in this research is an analysis of the interpersonal relationships of bank managers, and the sub objectives are to study the relationships between various branch managers; between managers and subordinates; and between managers and costumers. In this study, the interpersonal relationships of managers working for a corporation bank were studied in the period of 2008 – 2009 academic year. They were assessed on interpersonal needs. The data was collected through a survey method, and the sample was drawn from the population of bank managers, while other sorts of managers, like business managers, were ignored. The final sample consisted of 21 males and 5 females, with an average age of 34.12 years. 17 participants were married, and 9 were unmarried. The sample's educational qualifications ranged from a bachelor degree to a master degree. The scores obtained through the Fundamental Interpersonal Relations Orientation Behaviour (FIRO-B) were analyzed. Based on the hypothesis, there is a positive significant correlation between inclusion and affection of bank managers related to their expressed and wanted needs. Therefore, the

managers who express and want affection, also express and want inclusion; but it shows nobody likes to be controlled, while they like to control others a little. Interpersonal orientation of the subjects on all the 3 dimensions revealed a discrepancy between wanted and expressed scores. Very few people have a perfect match between wanted and expressed, based on the direction of the discrepancy (+ / -), that is, wanted score being higher than expressed score and vice versa. Hence, knowledge about the discrepancy between wanted and expressed on each of the dimensions of FIRO-B would help managers in estimating the dynamics of their behavior with customers, and then customer satisfaction.

Keywords: *bank managers, interpersonal relationships, interpersonal factors, subordinates, customers*

An analysis of viewer evaluations on the images of female Japanese talents in television commercials

OKANO, M. (Bunkyo University), OKANO, M. (Bunkyo University)

Asakawa and Okano (2009) performed text mining on viewers' free-description answers on their liking or disliking of characters in television commercials, and derived the following four dimensions: (1) external appearances, (2) personality trait, (3) theatrical skills, and (4) age. This research aimed to investigate the reliability of these four dimensions of a character's "image" and examine which of the four dimensions has the biggest influence on a viewer's liking or disliking of characters. Two television commercials, each featuring one popular female Japanese talent, were shown to students. They evaluated 24 items related to the characters' image and the liking or disliking of the talent on 7-point scales. By performing a factor analysis on the acquired data, the following four dimensions were extracted: (1) external appearance, (2) personality trait, (3) maturity, and (4) familiarity. The results of multiple regressions conducted on the four extracted dimensions (independent variable) and the degree to which the participants had a favorable impression of the talent (dependent variable) showed that external appearances,

personality trait, and familiarity influenced the degree of favorable impression, and personality trait has the biggest influence on the liking or disliking of the characters. These four dimensions corresponded well with the factors obtained by Asakawa and Okano (2009). Therefore, it seems that these four dimensions are effective for accurately understanding the image of the characters shown in television commercials.

Keywords: *television commercials, viewer evaluations, personality traits, appearance, familiarity*

An applied investigation of how sport specific physiological demand influences the psychological processes of decision-making in hockey

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Research has consistently demonstrated differences in decision making performance of experts and novices, however, in a sport such as hockey, physiological demand might also influence decision-making performance. Previous studies have tended to explore the effect of fatigue or exertion, rather than game-like physiological loads on decision-making and have often used non-sport specific decision-making tasks. This study aimed to determine if physiological demands, created via the Loughborough Intermittent Shuttle Test (LIST), affected decision making performance. A 25 item screen-based decision making test consisting of 5 equivalent test forms was developed with 210 participants (M age = 20.45 years, SD = 4.75). The test displayed good discrimination between playing level $F(1, 208) = 32.26$, $\eta^2 = .134$, $p < .001$, good test re-test reliability, and acceptable internal consistency ($\alpha = .63$). The LIST is a shuttle test that is used to recreate high-intensity intermittent sports, such as soccer and hockey, and requires a repeated walk, sprint, run (85% of VO_2 max), and jog (50% of VO_2 max) pattern of exercise over 20m for 15 minutes followed by a period of rest. The LIST was completed by 10 hockey players (M age = 24.10 years, $SD = 4.04$) who performed the decision making test pre exercise and after each of four 15 min exercise periods. Physiological

demands increased across the exercise periods, with a significant effect for heart rate, Wilk's $\lambda = .01$, $F(5, 5) = 117.63$, $p = .001$, $\eta^2 = .99$, ratings of perceived exertion, Wilk's $\lambda = .04$, $F(4, 6) = 36.66$, $p = .001$, $\eta^2 = .96$, and blood lactate, Wilk's $\lambda = .01$, $F(5, 5) = 105.93$, $p = .001$, $\eta^2 = .99$. This increased demand, however, did not appear to influence decision making accuracy, Wilk's $\lambda = .53$, $F(4, 6) = 1.31$, $p = .26$, $\eta^2 = .46$. The LIST appeared to adequately recreate the physiological demands of a game of hockey, which has practical implications for testing and training in hockey. As the game-like physiological demands did not appear to affect decision making performance, coaches, players, and sport psychologists may not need to specifically train players for decision making under physiological demands.

Keywords: *decision making, physiological demands, sport, hockey*

An athletic counselling programme in football academy in Japan

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Balancing competitive sport activities and other aspects of life; education, work, family, finance, etc is important for athletes to achieve their maximum potentials. This study aims to introduce an attempt to establish a holistic career support programme based on the post modern career counseling theory in the Japan Football Association's JFA Academy FUKUSHIMA. Since its opening in 2006, JFA Academy FUKUSHIMA has gathered the nation's elite football (soccer) players who are from 13 to 18 years of age. They have been relocated from their home, and are lodging in accommodations near the training facility, and attending local schools to maximise their training effects. Subjects were 30 elite footballers aged between 14 - 16 years training in the JFA Academy FUKUSHIMA, receiving a series of counseling interventions conducted since June, 2009. A counselor visited the academy once a month or so and provided one on one counseling sessions based on the post modern career counseling theory. During this intervention period, some of

the athletes were relocated to Europe, and others were preparing for their respective transitions; becoming a professional footballer, going to tertiary education while continuing to play football etc. Positive changes such as a deeper self understanding or rational decision making are observed with some of the subjects during this intervention period. In conclusion, since these athletes are training in this special condition which requires intensive training, counseling services by a specialist to ease their daily concerns, and to prepare them for transitions after leaving the academy, seems to be very important. Furthermore, the balanced lifestyle would benefit their athletic performances.

Keywords: *athletes, post-modern career counseling theory, transition, lifestyle*

An attempt to measure implicit and explicit shyness: Using Implicit Association Test (IAT)

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The previous research has shown the difference between the factor in which participants' implicit and explicit shyness is predicted (Asendorpf, Banse, & Mücke, 2002). In interpersonal situations, implicit self-concept (estimated from implicit shyness) predicted spontaneous shy behavior, while explicit self-concept (estimated from explicit shyness) predicted controlled shy behavior. The purpose of present research is to examine whether the same result would be reproduced in Japan. Ninety-one college students completed the Trait Shyness Scale (TSS), Extroversion Scale, Social Desirability Scale (SDS; consisting of two factors: self-deception and impression management), and Self-esteem Scale. Fifty college students (those that participated in the Study 1) came to the lab and completed a shyness Implicit Association Test (IAT) and self-esteem IAT. Friends of Study 2a's participants completed the TSS, Waseda Shyness Scale, Praise-seeking, and Rejection Avoidance Scale. These scales were modified, because the targets of ratings were those that participated in the Study 2a. Through

factor analysis, four factors were extracted (interpersonal tension, sociability, praise seeking, and rejection avoidance). The negative correlation was detected between TSS and SDS (self-deception only), as well as between the TSS and Self-esteem Scale. The correlation between implicit and explicit scales (implicit/explicit shyness and implicit/explicit self-esteem) was positive, but it was not significant ($r_s < .22$, $p_s > .14$). However, there was significant negative correlation between implicit shyness and implicit self-esteem ($r = -.30$, $p < .05$). Using the covariance structure analysis, it was revealed that the correlation between implicit self-concept (estimated from shyness IAT) and explicit self-concept (estimated from TSS) were positive and significant. Also, implicit self-concept predicted others-rated high interpersonal tension. Meanwhile, explicit self-concept predicted others-rated low sociability and low praise seeking. Rejection avoidance was predicted by both implicit and explicit self-concepts. The result of present study was similar to that of Asendorpf et al. (2002). It was revealed that there was significant correlation between implicit shyness and self-esteem scale, which was also seen in the result from the explicit level examination.

Keywords: *shyness, self-concept, self-deception, sociability, praise-seeking*

An effective intervention for students with traits of pervasive developmental disorders and their parents: Social skills training and psychoeducation

KONISHI, M. (Tokai Gakuin University)

Schools in Japan, in recent years, are giving special attention to the education of students with pervasive developmental disorders. I found that most teachers and parents are embarrassed by the behavior of the students. Then, to improve their uncomfortable mood and social skills, I conducted two programs for junior high school and high school students, and their parents, with the cooperation of the teachers. The first program was a social-skills training for students displaying the traits of pervasive developmental disorders; here, they learnt basic social skills owing to their lack of good

communication skills with friends and teachers. I then conducted a psychoeducation program for the parents of these students. In this program, the psychological characteristics of adolescents were discussed and favorable nurturing practices were suggested to the parents. We also discussed the issues faced by these students and how they cope with them. The measures used include the Profile of Mood States (POMS; Douglas M., et al., 1971), Self-esteem scale (Rosenberg, 1965), and Kikuchi's social Skill Scale (Kikuchi, 1988). The results of these programs showed an improvement in the social skills of the students, and self-esteem of the students, parents and teachers. And consequently, these improvements reduced the tension, depression, anger, fatigue and confusion felt by the students and their parents and teachers. Further, they increased the vigor and self-esteem of all. In conclusion, these programs improved the social skills of the students. Consequently, they led to a higher level of self-esteem, and improved the uncomfortable mood felt by all participants; the students, parents of the students, and teachers.

Keywords: *pervasive developmental disorder, self-esteem, social-skills training, psychoeducation, Japanese*

An international comparative study of the relationship between activities other than school lessons and mathematics achievement: Using an R-based programme for nominal categories model

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The purpose of this study was to clarify the relationship between students' achievement in Japan and activities other than school lessons using the data of The Trends in International Mathematics and Science Study (TIMSS) 2003. To clarify the feature of Japan, we compare with the East Asian nations that participated in TIMSS2003. The data were achievement and questionnaire items of mathematics in Japan and four countries in East Asia. The four items were the frequency of the activities other than school lessons: watching TV, housework help,

home-work and supplementary lessons of mathematics. The sample was 4,413 students of the eighth school year (799 in Japan, 1002 in Singapore, 836 in South Korea, and 888 in Taiwan). The method of analysis was the Nominal Categories Model (NCM). This model can examine the selection tendency to the scale and the answers in more detail. The Item Category Reaction Function (ICRF) was drawn based on the estimated parameters. The difference between Japan and four other countries is shown as follows. Watching TV: in the subordinate-position of achievement, time tended to be long, and it was longer than the four other countries. Housework help: time tended to be long in high-position students, and the ratio of the student who doesn't help at all is high regardless of the achievement. This tendency was similar for Hong Kong. Home-work: there was no difference between the time length brought by the difference of the achievement. There was a similar tendency for Hong Kong and South Korea. Supplementary lessons of mathematics: tended to be long in high-position students and the items of low frequency were chosen higher than the four other countries. As a result, the differing tendency became clear, with the frequency of the chosen item of the activity corresponding to achievement. The proven realities were the results of supporting the result that had been shown so far. However, this differs from past research in describing the selection ratio corresponding to the scale of achievement, and this suggests it is profitable to settle on the educational curriculum in the future.

Keywords: *student achievement, Trends in International Mathematics and Science Study (TIMSS), curriculum, mathematics, nominal categories model*

An investigation of behavioural reactions to rejection in high and low rejection sensitive individuals

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BOWLES, T. (Australian Catholic University)

Theory and past research has demonstrated that rejection sensitivity is associated with poor interpersonal functioning characterised by maladaptive behavioural patterns. The aim of

the current study was to determine whether high and low rejection sensitive individuals can be differentiated on the basis of their behavioural reactions to rejection, and whether individuals exhibit cross situational stability in their responses to rejection. The participants were 203 students ($M=23.13$, $SD = 6.88$), who were required to describe how they would respond to rejection from four different sources, parents, friends, partners, and strangers using hypothetical rejection scenarios. Deductive methods were used to categorise the descriptive responses according to adaptive and maladaptive response types. A hierarchical log linear analysis was conducted and revealed two significant two-way interactions between response type and level of rejection sensitivity, and response type and rejection scenario. These findings suggest that when faced with rejection, the type of response enacted (adaptive or maladaptive) is influenced by both an individual's level of rejection sensitivity, and the source of rejection (partner, friend, parents, or strangers). Implications for interpersonal functioning, relationship development and maintenance will be discussed.

Keywords: *rejection, behavioural responses, rejection sensitivity, interpersonal functioning, relationship development*

Analyses of personal attitude construct on interpersonal relations in Japan and Malaysia

NAITO, T. (Shinshu University)

A scheme of interpersonal relations, especially the common cultural part of it, is subtle and implicit. In contrast, when we come into contact with a foreigner, we notice cultural differences. But we can hardly find out the total structure. So, we need a technique for assembling information. The aim of this study was to confirm effectiveness of personal attitude construct (PAC) analysis, as a measurement of interpersonal schemes, which contain interpretation of a subject and is suitable for discovery of factors. The subject was a Malaysian international female student at a Japanese university. The first procedure was as follows; i) presented the stimulus sentences about Japanese interpersonal relation for free

association, ii) required to order the cards of association according to importance, iii) instructed to estimate the distance of similarity intuitively, comparing all pairs of cards, iv) Cluster Analysis by Ward was done, and v) asked to describe the image about each cluster. Secondly, the same procedure about Malaysian interpersonal relation was carried out. Results cleared characteristics of Japanese interpersonal relations; i) first cluster was “bonds among fellows and concern for others”, ii) second cluster was “surface interpersonal relation and ambiguous behavior which veil real intention.” On the other hand, clusters of Malaysian interpersonal relations were i) “frank exchange of views, misunderstanding and undependable”, ii) “harmonious exchange beyond racial and ethnic backgrounds”, and iii) “endeavor to integrate peoples as Malaysian”. PAC Analyses could reveal the well-known characteristics of Japanese and Malaysian interpersonal relations by a Malaysian international student. We arrive at the conclusion that PAC analysis for single cases is an effective measurement of interpersonal scheme.

Keywords: *interpersonal relations, schema, attitudes, cultural diversity*

Analysis of individual and collective motivation on prosocial behaviour from a multilevel perspective

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The aim of this research was to understand how individuals, groups and communities perform ProSocial Behaviours (PSBs) to encourage the development of social networks that facilitate coexistence and well-being in more healthy social and environmental contexts. The main objective of this paper was to analyze the role of the motivational factors involved in the development of PSBs. In order to do this, based on a social-cognitive model, we explored the role of individual variables (age, gender, and personal dispositions such as positive orientation towards life, prosocial dispositions, moral disengagement and personal values) and situational variables (social exclusion, share

limited resources, uncertainty, culture or previous experiences) on motivational states or self-regulatory mechanisms (self-efficacy, affective states, intrinsic motivation), which facilitate individual and collective PSBs in four current socially relevant settings. We analyzed the social support behaviours towards excluded social groups – three experimental conditions were created across a simulated feedback of personality where participants anticipated exclusion, inclusion or control. Our results show the common and specific motivational determinants of the PSB displayed in each different setting from a multilevel perspective using structural equation modelling. The results show the mediator role of self-efficacy – interpersonal and emotional regulation – and effective states linked with intrinsic motivation to explain PSB. The analytical strategies involved in decision making that provoke prosocial behaviour through the analysis of verbal messages or ruminating thoughts during the decision making process are discussed.

Keywords: *motivation, prosocial behaviour, motivational factors, self-efficacy, decision making*

Analysis of resources and strain at work - The Recovery-Stress-Questionnaire for Work (RESTQ-Work): Versions for screening, organizational and individual recovery-strain-analysis

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To reach a differentiated view of strain, stress and burnout it is very important for work psychologists to have a strong tool to get a real deep insight into the different areas of strain and also the see the resources at work. In the line of ISO 10075-3:2002 and some national standards, work psychologists have to get a more exact assessment of these areas of strain. Additionally it is very important to measure resources and dimensions of stress at the level of organizations and also at the individual level. Looking at the life domain balance means to know about aspects of the working and the private environment. The RESTQ-Work measures strain and recovery and considers different life domains. The questionnaire is now available in various versions and languages. A screening

version that allows a rough judgment of the burnout risk was used in a representative survey ($n=1458$) and in further broader online surveys ($n=750$; $n=2500$). The RESTQ-Work consists of the base part which is the Recovery-Stress-Questionnaire (a form with 48 items or a parallel version with 24 items) and a work specific part. The different forms of the RESTQ-Work are designed for different areas of application. The current paper presents the theory and the structure of the RESTQ-Work, the reliability of the dimensions and subtests. The major advantage of the RESTQ-Work is the possibility to use it in employee surveys to get an overview about the recovery and strain balance and on the other hand to use it for individual assessments too. Especially for individuals it proved to be a very good way to use the results for an interview with the person and to derive interventions together with the assessed person.

Keywords: *strain, burnout, assessment, The Recovery-Stress-Questionnaire for Work, stress*

Animal psychology as a legitimate and viable field

ENGLAND, M.

The aim of this study was to explain and expound upon the application of human psychology to other animals. Animals may be perceived as beings with minds and related emotions. With such an approach, a field of animal psychology takes its place with that of the much studied human psychology. This paper explores such an approach and draws upon published research in doing so. By establishing that the study of animal psychology is just as legitimate a study as that of human psychology, its viability may be explored. The study of animal psychology may enrich the well being of animals, including humans.

Keywords: *animal psychology, animals*

Application of natural language in fire spread display

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How to express fire spread efficiently and effectively to firefighters is an important issue. The present study aimed to investigate how to present the fire alarm information, focusing on whether natural language alarm presentation was better than the alarm list presentation. Objective method and subjective evaluation were used to compare the differences among four forms of fire alarm information, including traditional alarm list, integrated alarm list, natural language, and natural language with spatial information. 12 firefighters were asked to read and listen to these fire alarm information, and then to choose the correct scenario matched with each expression from four scenario simulations. Six dependent variables were recorded for analysis, including percentage of correct responses, response time, description viewing time, simulation viewing time, switch times between description and simulation, and subjective ranking data. The results revealed that natural language was better than alarm list, and the effect was more robust when natural language added spatial information. The traditional alarm list was more accurate than other forms, but it costs more time to read and comprehend. For emergency scenes such as fire fighting, one which costs little time and brings about higher performance will be chosen as the formal description of the real product to improve the quality of it. From these results, we concluded that natural language with spatial information will be recommended for the expression used in future fire alarm systems.

Keywords: *fire alarm information, firefighters, natural language, alarm list*

Applying oral tactile imprinting theory to practice

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Breastfeeding relies on a number of psychological factors, yet generally, breastfeeding is not regarded as being within the scope of a practicing psychologist. What are the practical applications of applying the oral tactile imprinting theory to practice? By a literature search, those clinical outcomes advantaged by good latching by the newborn on the nipple are recorded. Those books recommended by the

International Lactation Consultant Association (ILCA), Australian Lactation Consultants Association (ALCA) and the Australian Breastfeeding Association (ABA) were used to record the advantages of achieving a good oral latch by the newborn on the mother. The results were collected under the categories of (1) mother based (2) infant based and (3) socially based. Results included: (1) the maintenance of the mother's hormonal status, general health and psychological wellbeing; (2) the infant's hormonal status in relation to the infant's emotional state and improved morbidity and mortality; (3) the direct and indirect monetary cost saving to the social system. To conclude, psychologists have a part to play in the promotion of the wellbeing of both mother and baby. Education in the process of lactation would be advantageous to psychologists in their clinical management of the mother and baby in the perinatal period, especially in the fundamental process of oral tactile imprinting.

Keywords: *breast-feeding, oral tactile imprinting theory*

Are stress responses (physical and psychological problems) attributable to stressors?

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According to the Lazarus and Folkman model, many stress studies using questionnaires have been carried out to demonstrate relationships among stressors, stress coping and stress responses. The present study examined the relationship between personality traits and stress responses. University students in the Tokyo metropolitan area ($N=95$) completed the Stress Response Scale (SRS) and Minnesota Multiphasic Personality Inventory (MMPI) in 2008. SRS is one of the Stress Self-Rating Scales (SSRS) and consists of 4 subscales (Emotional Response, Cognitive Behavioral Response, Physical Fatigue and Activation of Autonomic Nervous System). The participants were classified into high score group (HS group) and low score group (LS group) with Stress Response Scale. An ANOVA and t - test indicated that the HS group had significantly higher scores on 7

MMPI subscales (Hypochondriasis Scale, Depression Scale, Psychopathic Deviate Scale, Paranoia Scale, Psychasthenia Scale, Schizophrenia Scale and Social Introversion Scale) than the LS group except for 3 MMPI subscales (Hysteria Scale, Masculinity-Femininity Scale and Hypomania Scale). The results of this study suggest that physical and psychological problems (stress responses) are not always attributable to stressors. In Lazarus' model, evaluation and coping are thought of as major intermediate variables. However, we found that there is a close relationship between stress responses and personality traits, so when we examine the process from stressors to stress responses, we have to evaluate personality factors (there were not enough participants in the current study). We should continue these surveys to identify various characteristics that affect higher stress responses.

Keywords: *stress responses, personality traits, stressors, stress coping, university students*

Assessing the effect of safety training through a human-error-experience program

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Usui et al.(2007) developed a software program to prepare cognitive tasks on a personal computer that induce human errors so subjects can experience human errors while performing such tasks (referred to as "the error-experience program"). The purpose of this study is to implement safety training using the error-experience program and examine the effect of that training. The human-error-experience program contains two menus, the biased-attention menu (a menu through which subjects experience an oversight caused by a distraction) and the violation menu (a menu through which subjects experience the temptation of omitting checks when repeated checks are required). Participants were divided into two groups; one group experienced the biased-attention menu (biased-attention group) and the other group experienced the violation menu (violation group). After experiencing the program, participants were divided into groups of four to five members each. The groups then discussed

whether they had ever experienced such accidents and near-misses that occurred due to factors similar to those in the experience menu and described such accidents and near-misses if any. Twenty-five firemen participated in the program. The participants answered the Risk Propensity Questionnaire (RPQ), a questionnaire to assess risk-taking trends, before receiving the safety training and answered the same questionnaire after receiving the safety training. The average scores on the RPQ were compared before and after the safety training. The scores of all program participants changed significantly in the direction of enhanced safety. The average scores were then analyzed by dividing them into those of the biased-attention groups and those of the violation group. The scores for the violation group were found to have changed significantly in the direction of enhanced safety. The participants' safety attitude improved, verifying the effectiveness of safety training using the error-experience program. The effect of safety training was especially remarkable in the group that experienced the violation menu. In future work, we will analyze factors in the RPQ and examine the sustainability of the effect of safety training.

Keywords: *error-experience program, safety*

Assessing the function of a standards discrepancy in the relationship between fear of positive evaluation and social anxiety

CASHMAN, E. (Macquarie University)

The present study sought to examine whether a standards discrepancy mediates the relationship between fear of positive evaluation and experimentally induced social anxiety. In addition, the study experimentally tested whether the administration of bogus feedback (i.e., positive or neutral) would moderate the relationship between standards discrepancy and induced social anxiety. First year psychology students (81 female, 19 male) completed measures of social anxiety and depression. They then completed a 5 minute impromptu speech task which they were informed would be recorded and later viewed by university psychologists and compared to their second

speech in front of the same audience. The experimenter then administered randomly assigned feedback to participants on their speech performance to examine its effect on state social anxiety and ratings of standards for an anticipated second speech. Results did not support the mediation hypothesis, however, fear of positive evaluation and standards discrepancy were significant unique predictors of state social anxiety. The moderation hypothesis was also not supported as the interaction between feedback condition and standards discrepancy did not predict state social anxiety. The current study revealed that fear of positive evaluation was able to predict state social anxiety in a realistic social evaluative situation. Considering the above findings and previous literature, there is a need for future studies to examine the mediational role of standards discrepancy in a clinical sample of socially anxious individuals. Implications of the present findings extend to both future models of social anxiety and its treatment, in that positive evaluations and successful social situations do not necessarily revise the inherent negative cognitions of socially anxious individuals in regards to their social ability and can increase the intensity of their socially anxious fears.

Keywords: *standards discrepancy, positive evaluation, social anxiety*

Associations between different types of physical activity and depressive symptoms in Taiwanese older adults

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Less attention has been paid to explore the association of non leisure-time physical activities (NLTPA), including domestic and work-related physical activities, with depression. The study was designed to elucidate a) whether leisure-time physical activity (LTPA) and NLTPA are independently associated with depressive symptoms; and b) the relation of specific components of physical activity (frequency, duration and intensity) and depressive symptoms in later life. A total of 2727 persons (65+ years) participating in the 2005 Taiwan National Health Interview Survey were studied.

This study used a multi-stage stratified systematic sampling design with a nationally representative sample. Depressive symptoms were measured by the CESD-10 (Center for Epidemiological Studies Depression Scale-10). Participants scoring 10 or higher were classified as having depressive symptoms. Information on names, frequency and durations for each type of LTPA and NLTPA during the past 2-week period was self-reported. Metabolic equivalent intensity levels for each activity were assigned (31 identified LTPA, 10 identified NLTPA). Energy expenditure of each activity per week was calculated by: activity intensity code (kcal/min) × frequency × duration for each time (min)/2. The energy expenditure values were then added up into total weekly amount of energy expenditure for both LTPA and NLTPA. After adjusting for socio-demographic variables (gender, age, educational level, marital status, income), lifestyle behaviors (smoking and drinking) and health status (cardiovascular diseases, stroke, diabetes, body mass index, physical functioning), multivariate logistic regression models for predicting depressive symptoms were undertaken to compute adjusted odds ratios (AOR) for LTPA and NLTPA. Given that LTPA ($p < 0.001$) rather than NLTPA ($p = 0.69$) was associated with depressive symptoms, AORs for the three components of LTPA were calculated. Results showed that individuals expending less energy in LTPA had higher risk of depressive symptoms (0 kcal/week: AOR= 2.14, 95%CI: 1.26-3.63; 1-999 kcal/week: AOR=1.51, 95%CI: 0.88-2.61, reference 2000+ kcal/week). The benefit of risk reduction among the three components of LTPA energy amount was only observed in intensity ($p = 0.03$) (no change in breath: AOR= 0.41, 95%CI: 0.21-0.79; slightly fast: AOR=0.50, 95%CI: 0.24-1.03, reference fast or very fast). To conclude, LTPA, especially activities of light to moderate, is associated with reduced risk of depressive symptoms in older adults.

Keywords: *depression, older people, physical activity*

Awareness of environmental problems among Japanese youths and effective persuasion

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We tried to find the level of awareness of environmental problems among youths, and make clear effective persuasion of the need for energy saving. 97 female college students were questioned, asking about energy saving, their personality, and their parents' attitude towards energy saving. They also read two writings in two groups; one story is written with one-sided views of only the good things about energy saving, and the other is written with both good and bad views. Then, we measured the effects. 93% of the students were highly concerned about environmental problems, and the action they put into practice the most, is reducing trash. Also, as for the terms about the environment, they know global warming and photovoltaic generation well, but have little recognition of the term low carbon society. Terms that are usually heard through the media are well known. As to persuasion, the story with both sides was more persuasive. Parents' or their personality have no influence on the result. In order to increase awareness of environmental problems among youths, public information and education are important. Furthermore, in explaining the need for energy saving, persuasion shown with both good and bad sides is effective.

Keywords: *environmental issues, awareness, persuasion, Japanese*

Banning smoking in Victoria's licensed premises: An evaluation of a campaign to prevent butt littering behaviour

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The aim of this study was to assess the effects of a cigarette butt litter prevention campaign on butt littering behaviour, following the introduction of new legislation to ban smoking in Victorian licensed premises. Using behavioural observation, 2,444 records of butt disposal behaviour were collected at 64 outdoor public place smoking locations at licensed premises in

Melbourne. A systematic assessment was conducted of factors known to influence disposal behaviour such as the amount of litter on the ground, presence of appropriate butt 'binrastructure' and venue infrastructure designed to provide a comfortable environment for smokers. Six hundred and ninety eight venue patrons were surveyed to determine their level of support for the campaign. Data was collected from the month prior to the introduction of the campaign, during the campaign and at 5 month follow up. As a proportion of total butt disposals (binning and littering), littering accounted for 58% of total disposals one month prior to the campaign. Significant reductions in littering were evident (33%) during the campaign peak period; this remained largely sustained at follow up (37%). When venues were categorized by the rate of adoption of the innovation (Rogers, 1995), 'straggler' venues (where improvements were slow to arrive) showed the highest littering rates at all stages of the evaluation, with lowest rates evident for 'innovator' venues (where improvements took place very early). 'Straggler' venues however showed the largest percentage improvement in littering behaviour from pre campaign to follow up. Litterers tended to be further from bins than binners with 'innovator' venues relying more on ashtrays than the installation of permanent butt bins; the distribution of 'personal' ashtrays as campaign giveaways was ineffective with very few instances of use observed. Support for the campaign was strong and increased further during the campaign but was not sustained at follow up. Acknowledgement of early success in adaptation to change was recommended to facilitate sustained gains in the reduction of littering behaviour seen as a result of the campaign. Programs need to continue long enough to bring 'straggler' venues on board and provide tailored support to facilitate change. Early identification of adopter categories and tailoring promotions and support to suit specific indicators of venue readiness for change is likely to lead to sustained improvements.

Keywords: smoking, smoking, butt litter prevention campaign, butt littering behaviour, licensed premises

Being flooded: A qualitative study of the experiences of people affected by the Mackay 2008 flood

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University of Technology)

The aim of this qualitative study was to explore what it was like to live through the Mackay flood and its aftermath. In particular, it focussed on what affected people found particularly stressful during the flood and its aftermath, what factors helped them cope, and the long-term impact on their psychological well-being. Results will inform the next study which will be a larger scale quantitative investigation. Semi-structured interviews were conducted with Mackay residents who had experienced water damage to their home or possessions on February 15, 2008 ($N = 18$). The interviews were conducted twenty months after the flood. Participants were asked what happened during the flood and the months that followed, what they found to be particularly stressful and what factors helped them cope. They were also asked about the helpfulness or otherwise of the disaster management and community recovery response. Interview data were subjected to thematic analysis. Results suggest both positive and negative impacts on well-being that were attributable to the flood (for example, health problems, exacerbation of existing mental health issues, restored faith in "community spirit" and increased self-efficacy). For example, one woman declared, "I've survived this, now I feel like I can cope with anything." Themes concerning the factors influencing adjustment include the helpfulness or otherwise of insurance companies, support network strength, and feeling helpless compared to having some knowledge of what to do as the flood waters rose. For example, one participant commented "There was no-one to tell us what to do" and another said, "I rang 000 and they said, police, fire or ambulance and I said SES, to which they said no, police, fire or ambulance". This study used qualitative methods to explore the long-term psychological impact of the Mackay flood. Themes concerning stressors and coping strategies are discussed and detail of how these themes will inform future research are outlined. Some themes suggest implications for

policy and training in insurance companies and public education regarding what steps to follow in the case of flood.

Keywords: *flood, psychological well-being, natural disasters, community recovery response, self-efficacy*

Beyond the pain: Exploring the psychosocial meaning of injury and illness

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A life history case-study approach was used to explore the meanings of injury and illness experiences from the perspective of a junior football player, and a senior coach (Rick and Ben). Rick and Ben were both interviewed twice each, and each conversation was recorded and then transcribed verbatim. Various excerpts were taken from each participant's story, and the selected portions were then interpreted using an Eriksonian (Erikson, 1985) framework. Rick had strong desires to become a professional footballer at the end of his junior career, and through achieving selection to a state team his dreams were beginning to be realized and he was gaining a sense of industry. Rick's experiences with multiple injuries led him to develop a sense of inferiority as he was unable to demonstrate competence on the field. The timing of Rick's injuries prevented him from playing much football in his final year of juniors, and so he was not able to be drafted to the professional ranks. Rick's subsequent struggles in the senior system provided some challenges relating to his sense of identity. Ben was a senior level basketball coach who experienced a severe heart attack, and thus was unable to continue coaching temporarily. Ben saw coaching as an opportunity to pass on knowledge to future generations of players, and felt a great deal of satisfaction in seeing former athletes develop into high-achieving adults. Ben had developed a sense of generativity through desiring to pass on knowledge, but his experience with illness also resulted in issues of intimacy and isolation. Erikson's psychosocial stages of development, rarely used in sport psychology research, were useful in understanding the athlete's and the coach's life histories. Further research into the

relationship between psychosocial development, and enforced absence from sport, could provide greater insights for helping not only injured athletes but also coaches.

Keywords: *Erikson's psychosocial stages of development, case study, Injury, Illness, football*

Biofeedback training using indicators for relaxation and alertness from an EEG signal

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The aim of this study was to develop a series of new indicators for the biofeedback treatment of psychological and psychosomatic disorders. We recorded single-channel EEG using two frontal electrodes, and developed a series of indicators using wavelet analysis for various dimensions of conscious states such as concentration, alertness, awareness, relaxation, etc. The indicators for alert relaxation, *i_35* and *i_22*, were selected as indices for biofeedback training. This was applied in experimental treatments such as post earthquake recovering, grouped relaxation training, and problem solving. *i_35* and *i_22* were found to be significantly correlated with mental relaxation and mindfulness, respectively. We have also identified several indices that may reflect anxiety. Biofeedback training based on the real time analysis of these indices, especially the *i35*, could result in better self-awareness and psychological health condition. Our results indicate that EEG parameter-based biofeedback training may be useful for mental health management.

Keywords: *biofeedback training, EEG, psychological disorders, psychosomatic disorders*

Blessed are the peacemakers: SmartAid's expansion of the personality-focused performance requirements

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This paper describes early steps in research programmes intended to infuse relevant industrial psychology principles into “online volunteerism” (see Foster-Thompson & Atkins, in press; Carr & O’Driscoll, 2008). This present phase of research builds upon prior expansions (Atkins, Carr, Fletcher, & McKay, 2006) of Raymark, Schmitt, and Guion’s (1997) Personality-focused Performance Requirements Form (PPRF) via new data sets supporting exploratory factor analyses (EFA). One hundred and seventy five psychology students, cogitating on jobs highly familiar to them, completed an expanded form of the PPRF. They did this while focusing on one job, preferably one not common for students. This expanded PPRF (Atkins, et al, 2006, May) added items capturing 16 classic lower-order factors in Cattell’s 16PF (Conn & Rieke, 1994). Expansion was necessary, as Raymark’s PPRF had fewer lower-order factors, despite covering the Big 5 higher-order factors. A prior panel trimmed this to roughly 5 items per 16PF trait. Anticipating correlated latent attributes, EFA was pursued via principal axis factoring allowing oblique rotations. Scree plots suggested potentially efficient dimension reductions at 5, 10, 17, and 19 factors. Breaks largely evinced with reasonably interpretable results and simple structure. The Big 5 taxonomy was generally supported, as was Cattell’s classic 16PF arrangement (albeit Cattell’s surgency factor appears clouded by the social boldness factor here; likewise his shrewd/privateness factor by the oppositional/suspiciousness factor). Of course, given the sample size, only the Big 5’s replication is noteworthy in the omnibus EFA. Of special interest to aid applications, however, in our new results – there appears to be, within our modified form of the Raymark, et al., PPRF instrument, a factor related to “peacemaker” (i.e., “consensus-seeking mediator”), an important talent contributing to social capital. This may be surfacing in our sample since today’s students (i.e., Millennials) apparently have greater interests in social capital and community volunteerism. Because Cattell’s factor “A” is also associated with providing tender heartedness, while Cattell’s factor “E” is negatively correlated with submissive docile behaviour, the “A” and “E” items were run in a separate EFA with the items manifesting our new peacemaker factor. Several features of the

subsequent results support these latter item sets as capturing three distinct, but logically related, factors. Thus, this paper describes our plan for developing (e.g., CFA) and applying these and other 16PF factors in calculating fit between “aid project” requirements and volunteers (while also optimizing Belbinesque online “aid team” fit).

Keywords: *Personality-focused performance requirements form (PPRF), SmartAid, peacemaker, social capital, volunteerism*

Body image, eating behaviours and weight management in DanceSport competitors

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The research explored physical self-perceptions (e.g. body image dissatisfaction, perceived physical attractiveness and physical self worth) and patterns of eating and weight control behaviours of male and female ballroom dancers competing at the elite levels of DanceSport. Phase 1: Questionnaire packages, comprising the Eating Attitudes Test (EAT-26), the Eating Disorder Inventory (EDI-2); the Physical Self-Description Questionnaire (PSDQ) and a brief demographic questionnaire (designed specifically for this study) were distributed to male and female DanceSport competitors currently competing in Australia. Subscale scores were calculated for the EAT-26, EDI-2 and PDSQ. Demographic data were analyzed using summary statistics. Appropriate t tests and MANOVAs were undertaken to compare male and female dancers. Phase 2: On the basis of participant responses in the questionnaires, 8 dancers were invited to participate in follow-up semi-structured interviews to explore in greater detail their eating and weight management behaviours and to examine the influence of the competitive DanceSport environment on dancers’ physical self-perceptions and related behaviours. Four of the invited dancers were identified as having a healthy body image and approach to weight management, whereas the other four participants indicated a moderate-high level of body dissatisfaction and engaged in disordered eating and/or other weight management behaviours. Tape-recorded

interviews were transcribed and content analysed independently by both members of the research team. The coded data was then collated to identify common themes within and across the two groups of participants. Where possible, male and female data were analysed separately. A preliminary analysis of the data showed similarities and differences between male and female DanceSport competitors as well as between this population and other dance-related groups (e.g., ballet, cheerleaders). The data also highlighted several areas of influence of the competitive DanceSport environment on dancers' body image and the ways in which the dancers cope with the physical and aesthetic demands of the sport. These results are discussed in terms of past research and DanceSport cultural contexts. The results are also considered in light of research undertaken with athletes from aesthetic sports, such as diving and gymnastics. A full analysis of the data is currently underway and is expected to support the pattern of results revealed by the preliminary analyses. Further conclusions will be made regarding the implications of these findings for the health and wellbeing of the greater DanceSport community.

Keywords: body image, eating behaviours, weight management, physical self-perceptions, dance

Brazilian personality factor questionnaire: Development and validity evidence

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The aim of this presentation is to discuss the development and validation studies of the Brazilian Personality Factor Questionnaire (BPFQ), which was created to assess personality traits based on Five Factor Model (FFM). The BPFQ was developed considering Brazilian common language expressions of the five personality domains. Different sources were used to construct the scale: specialized literature regarding the FFM, a Brazilian study that identified personality markers as did Goldberg, other personality scales that assess the same domains, the DSM-IV and the International

Personality Item Pool. Validity studies of BPFQ were conducted with 6,599 subjects, from 11 different Brazilian states. Their mean age was 22.5 years ($SD = 7$) and 62.4% female. The BPFQ has 126 items that describe the way people feel, think, and behave. The BPFQ had its internal structure analyzed with exploratory factor analysis and five factors were extracted in agreement with the content of the FFM. Cronbach Alphas were .90, .84, .84, .82, and .70 for Neuroticism, Extraversion, Agreeableness, Conscientiousness, and Openness, respectively. Another factor analysis conducted to assess factor facets showed four facets for Neuroticism and Extraversion and three facets for Agreeableness, Conscientiousness, and Openness. Several validity studies were conducted. Their results showed correlations between Neuroticism and its correspondent factor at the Eysenck Personality Questionnaire ($r = .80$; $p < 0.001$) and the Beck Depression Inventory ($r = .66$; $p < 0.001$), and between Agreeableness and Anti-social personality disorder symptoms ($r = -.59$; $p < 0.001$). Another study correlated the BPFQ with the NEO-PI-R (Brazilian version) and its results showed several significant correlations between the correspondent personality factors, ranging from .65 (Openness) to .82 (Agreeableness). The studies conducted with BPFQ indicate its usefulness at health care context, vocational guidance, clinical treatment of chemical dependents, and research in several fields. In general, these findings were in accordance with most theoretical expectations and with findings in the literature, and they indicated positive validity evidence for the questionnaire.

Keywords: personality factors, big five model of personality, personality markers, Beck Depression Inventory

Building a new role for educational psychologists through guided participation of students of psychology into "communities of work learning"

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The aim of this study was to analyse mental models and activity systems through educative

experiences that “cross boundaries” between the “academic world” of university and the “real world” of work. “Psychologists in modeling” learn to work with different professionals in educational contexts through actual societal practice. The framework for this research is the “contextualized shift” in psycho-educational agents (Pintrich), “mental models” and cognitive change in educational contexts (Rodrigo), cultural-historical “activity theory” (Engestrom), and the Vygotskian concept of Zone of Proximal Development, to understand the process of “professionals modeling” as well as the process of developing minds through schooling. Three experiences of apprenticeship narrated by different groups of students of psychology in educational contexts were analysed. The first was of applied psychology in education, in institutions with special educational needs schooling; the second was of research in education, to investigate “integration” in mainstream inclusive school and TICs in special education; and the last was of teaching psychology, in secondary school or university courses. The methodology used was descriptive ethnography with quantitative and qualitative data. Questionnaires about situation-problems from psychologists’ intervention perspective in education were given to 200 subjects at the beginning and end of their apprenticeship. A multidimensional matrix of analysis of psychologists’ professionalism was applied to examine the shifts happening between pre-test and post-test in students’ mental models, and differences related to contexts and roles appropriate in advanced students of undergraduate courses of psychology at the same Argentinean university during 2008. Professional knowledge and competence is co-constructed in the contexts of work and study. The historical role of educational psychologists related to segregated schooling and IQ assessment is changing towards a “contextualized shift”, however changes are different for different roles appropriation and for different model dimensions, with strong tension between “clinical models” in psychologists formation (one matrix of development and focus on individual de-contextualized mind) and the need for new perspectives in inclusive education. In conclusion, we learn to work while working, although we do not know at the beginning how

to do it. Those who learn have a chance to build a way to do something with others. While they are learning they choose one from many ways, likely different to the tutors’ way, including one that isn’t yet there.

Keywords: *educational psychology, guided participation, community, psychology students, real world*

Building explicit and implicit trust toward a new leader in the Chinese context

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Research on South Koreans showed that reading about a new leader’s trustworthiness could form explicit (conscious evaluation of trust) and implicit (non-conscious associations between a leader and trust) trust (Kim, Shi, & Kim, 2009). While Chinese may also rely on information to form explicit trust, they may form implicit trust through merely knowing someone is a leader, since there is a prevalent stereotype which associates the position of leaders with trustworthy characteristics. Therefore, merely revealing a person to be a leader may be sufficient to form implicit trust. Studies 1 and 2 replicated Kim et al.’s (2009) design. Study 1 investigated the effect of reading about a new leader’s trustworthiness on explicit and implicit trust. Study 2 was a replication of study 1, but examined the effect of positive or negative rumors before exposure to information. In study 1, 63 participants read a short profile about a fictional leader and completed pre-test measures (affect and cognition based explicit trust measures and an implicit association test (IAT)-based implicit trust measure). Participants were then randomly assigned to either the information group, where participants read information about the leader’s trustworthiness, or to a control group. At post-test, participants completed identical measures of trust as in the pre-test. In study 2, 120 participants read positive or negative rumors about a new leader then completed the same procedures as study 1. In both studies, a one-sample t-test on Pre-test measures showed higher than neutral affect, cognition, and implicit trust across all conditions. Also, in both studies, analyses revealed the

information group showed significantly increased explicit trust toward the leader compared to the control group, but there was no difference in implicit trust. In study 2, positive rumors resulted in significantly higher affect and cognition based trust than negative rumors at pre-test, but there was no difference in implicit trust. Reading about a new leader's trustworthiness was effective in increasing explicit trust, but did not affect implicit trust, which already existed at pre-test. In addition, rumors influenced explicit but not implicit trust. Despite being both east-Asian, Chinese and South Koreans differed substantially in the pattern of trust formation.

Keywords: *leadership, explicit trust, implicit trust, rumors, Chinese*

Calling at work, perceived organizational support and work engagement on nurses

CHRISTIAN, F. (University of Surabaya), BATUADJI, K. (University of Surabaya)

This paper investigates the topic of the meaning of work, especially a calling to work, on nurses. Nurses with a calling orientation to work, rather than for financial rewards or for advancement, find fulfillment in doing the work. In callings, the work is an end in itself, as opposed to a means to some other end, and is usually associated with the belief that the work contributes to the greater good and makes the world a better place. This research found that nurses who have higher scores in calling orientation at work and perceive that they have higher support from an organization will show high engagement with their work. The participants are nurses from two middle-class hospitals in Surabaya, Indonesia (N=100). The implications of these findings for health-care workers will be discussed.

Keywords: *meaning of work, calling orientation, perceived organisational support, work engagement, nurses*

Can personality characteristics predict tendency to addiction?

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The aim of this research is to test this question of whether there are there specific personality characteristics that lead to addiction. The method of this research is causative-comparative (ex post facto). One hundred and fifty three addicted people and 153 non-addicted people were randomly selected and MoKioly's Characterology Inventory (MCI) was administered on them. The inventory assesses personality based on eight characteristics: sanguine, indifferent, nervous, indolent, indignant, passionate, sentimentee, amorphous. Findings showed addicted people are much more indifferent, sanguine and passionate than non-addicted people. In conclusion, in regard to people with these characteristics are much more at risk, they should be trained with special plans and be cared so that the tendency to addiction in them decreases or is controlled.

Keywords: *Personality characteristics, Addiction, Tendency to addiction, MoKioly's Characterology Inventory (MCI)*

Carer-child relationships in permanent care programs

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Over the past 20 years, there has been a steady increase in permanent care placements in Australia, however, relatively little research has been conducted on how to best support this growing population. The aim of this study was to examine carer and child variables in permanent care carer-child relationships. Participants were 46 permanent carers of at least one child aged between 3-12 years. Carers were recruited from metropolitan and rural permanent care agencies. Participants completed a questionnaire booklet on empathy, parenting styles, the relationship with their child, and on child variables including emotional and behavioral difficulties, temperament, and resilience. Thirteen carers also participated in a qualitative interview. Carer variables were less important in predicting carer-child relationships than child variables, especially emotional and behavioral difficulties. Most children had significant difficulties. Qualitative data were consistent with quantitative findings, showing

that it was the child's troubling behaviors which were the most taxing on the development of positive carer-child relationships. Where carers perceived improvements in their children's behaviors or could recognize positive aspects in their children and their relationships with them, this seemed to support carer-child relationships. Given the extent of emotional and behavioral difficulties among children in permanent care, effective management of these challenges by carers may be an important consideration in the development of positive carer-child relationships.

Keywords: *relationships, behaviour, permanent care placements, caregivers, Australia*

Causal analysis utilizing structural equation modeling based on third-order moment structures

HATTORI, T. (University of Tsukuba)

Structural Equation Modeling (SEM) is a powerful multivariate analysis technique that incorporates many of the techniques of traditional statistical analysis (e.g., regression analysis, causal modeling, confirmatory factor analysis, correlation structure models) as special cases. The serious problems with using traditional SEM relate to model under-identification and the existence of equivalent models. In contrast to traditional SEM plagued by such problems, non-normal SEM (nnSEM) utilizing higher order (e.g. third and fourth) moment structures has the potential to overcome these problems. We develop computer programs for the nnSEM approach that incorporate the asymptotically distribution free (ADF) estimation method. Analyzing several sets of real-life data with the programs, it is shown that the nnSEM utilizing third-order moment structures can estimate the parameters of structural models, which could not be identified by traditional SEM. The relative fits of equivalent models are also examined. Finally, based on simulation studies, we present the necessary sample sizes in order to detect significant path coefficients in full path models with two or three observed variables and those with three latent variables with two observed variables each.

Keywords: *structural equation modeling, multivariate analysis, statistical analysis*

Change of career awareness and adjustment in Japanese adolescents

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Preparing for an adult career is an important career developmental task of adolescence. Hypothetically, career development is positively related to adjustment, which incorporates multi-dimensional constructs. Although a number of studies have demonstrated that career development in adolescents is positively related to various indicators of adjustment, the types of adjustment that are effective in changing the levels of career development have not been clarified. Therefore, these variables were investigated in Japanese adolescents. Japanese high school students ($n = 510$) participated in this study. They completed the Career Awareness Scale and the Adjustment Questionnaire at Times 1 and 2, 12 months after Time 1. The Career Awareness Scale was used to assess the level of adolescents' career development and the Adjustment Questionnaire was used to measure five areas of adjustment that included self-acceptance, school adjustment, family adjustment, friendships, and academic achievement. Cross-sectional relationships between career awareness and the five areas of adjustment were examined at Times 1 and 2 respectively. Results indicated that similar to previous studies, the career awareness score was positively related to the five adjustment scores. Participants were then divided into one of four groups based on the career awareness scores at Times 1 and 2 (high-high, high-low, low-high, and low-low groups). In this study, we focused mainly on low-high and low-low groups. Five analyses of co-variance were conducted to examine differences between students who increased career awareness score (low-high group) and those who maintained low career awareness score (low-low group) on the five areas of adjustment scores at Time 2, while controlling for each score at Time 1. The main effects of the group were significant for school adjustment and academic achievement scores. Post hoc analyses for these two adjustment scores indicated that the low-

high group had significantly higher scores than the low-low group. These results suggest that school adjustment and academic achievement have a strong influence on the career development process of adolescents.

Keywords: *career awareness, adolescents, school adjustment, career development, Japan*

Change of emotions and cognition before a deadline on an academic task

KOHAMA, S. (University of Tsukuba)

The aim of present study is to investigate the change of emotions and cognition when a student doesn't engage in an academic task. Delaying what should have been done is viewed as academic procrastination. Many studies have investigated academic procrastination to the extent of dispositional phenomena, and revealed positive relation between academic procrastination and psychological illness (e.g. Solomon & Rothblum, 1984). Despite procrastination being negatively related to psychological illness on one occasion (Tice & Baumeister, 1997), few have investigated academic procrastination from a situational view. Thus, this study investigates situational change of emotions and cognition which take place in academic procrastination. Fear of failure and positive emotion were investigated as emotional factors, and optimistic thinking was investigated as a cognitive factor. Participants were 94 undergraduate students attending psychology classes in a Japanese university. The participants were asked to rate questionnaire three points at a time; seven days, three days, and one day before a deadline. Between 18:00-20:00 on the research day, e-mails were sent to participants' cellular phones. Participants were then asked to rate a web-based questionnaire. At the beginning of the questionnaire participants were told to recall why they didn't engage in the academic task on that day. Three variables (fear of failure, positive emotions and optimistic thinking) were measured by 4 items. Items were rated with a 5-point Likert scale. To compare emotional and cognitive factors with each point of time, one factor within-subjects ANOVA were conducted. Fear of failure at three days before deadline ($M=2.31$) was significantly

higher than that one day before deadline ($M=2.61$) ($F(2,93)=4.34$, $p<.05$). Optimistic thinking at seven days before deadline ($M=3.24$) and at three days before deadline ($M=3.10$) was significantly higher than that at one day before deadline ($M=2.46$) ($F(2,93)=16.72$, $p<.001$). There were no significant differences on positive emotion ($F(2,93)=2.00$, n.s.). The mean score of positive emotion was 2.78 (seven days before), and 2.89 (three days before), 2.67 (one day before). Investigations revealed that students who did not engage in the academic task felt negative emotions and pessimistic thoughts near the deadline. These findings imply that the relationship between procrastination and psychological illness strengthens near a deadline.

Keywords: *emotions, cognition, deadline, academic procrastination, fear of failure*

Changes of mental health during unemployment: A longitudinal study

TAK, J. (Kwangwoon University)

This study was intended to examine changes in mental health variables among unemployed adults using a longitudinal study. First, the survey was administered to unemployed adults within two months after unemployment using an online survey method. A total of 1,530 people responded to the survey. Second, the survey was administered to the same individuals six months after the first survey. Only 706 individuals responded to the online survey. Among them, 443 people successfully got a job. Finally, the survey was administered to those 706 people six months after the second survey. This time 483 individuals responded to the survey. Respondents were classified into four groups based on status of employment at three different times: Group 1 represents unemployment-reemployment-reemployment across the three different periods, Group 2 represents unemployment-reemployment-unemployment, Group 3 represents unemployment-unemployment-reemployment, and Group 4 represents unemployment-unemployment-unemployment. Mental health variables such as GHQ, anxiety, depression, and psychosomatic were measured to examine how

these variables change depending on the status of unemployment across the three different periods. Results showed that mental health becomes worse after unemployment, but it gets better after reemployment. Mental health appears not to get worse continuously. Future study needs to be conducted using a longer interval during unemployment to confirm these results.

Keywords: *mental health, unemployment, longitudinal study*

Children's emotion regulation and socialization in preschool

HIRABAYASHI, H. (Tokyo Woman's Christian University)

Emotion regulation is an element in emotional competency (Denham et al., 2006). In early childhood, children express negative emotions at first, and then they will be able to regulate their negative emotions gradually. In preschool, the teacher plays an important role in the development and socialization of emotion regulation. The first purpose of this study was to examine the frequency and the context of children's negative emotions (e.g. sad, anger) in preschool. The second purpose of this study was to examine the teacher's strategies of regulation for children's negative emotions. Three year-old children and the teacher were observed in a preschool where the frequency and the context of children's negative emotions were recorded. The teacher's strategies of regulation for children's negative emotions were also recorded. 103 episodes were observed, 31 sad episodes, 62 anger episodes, six sad/anger mixed episodes, and four others. Boys expressed negative emotions more than girls. In sad episodes, interpersonal conflict occurred as body aggression, and children expressed sadness and crying. In anger episodes, interpersonal conflict occurred as a scramble for a single toy. The teacher's strategies of regulation for children's negative emotions were various. In sad episodes, the teacher used several strategies like comfort, stroking, and asking for the reason of the sadness. In anger episodes, the teacher used several strategies like stopping the aggressive behavior, prohibition, asking for the reason of the anger, and explanation of the other child's

intention. It was found that three year-old children often expressed negative emotions in preschool, because of interpersonal conflict. The teacher used various strategies of regulation for children's negative emotions. The teacher coached children how to deal with their negative emotions and socialized children's emotions.

Keywords: *emotion regulation, children, socialisation, preschool, teaching*

Clients' and their treating clinicians' perspectives regarding deliberate self-harming behaviours

GOVINDAN, A. (Deakin University), MILDRED, H. (Deakin University)

Deliberate self-harm (DSH) is a significant health problem in the Western World, and a risk factor for completed suicide. The aim of the current study was to identify the reasons for, and risk factors associated with Deliberate Self-Harm both from the perspective of people who significantly self-harm, as well as their treatment of mental health clinicians. A qualitative methodology was used to explore the causes, motives and factors associated with deliberate self-harm from these two groups of experts. Focus groups were conducted both with clients with a history of DSH, and mental health clinicians who were treating them in an acute mental health setting. The researcher conducted the focus groups with a consumer consultant for the mental health service and extensively documented responses from participants. Repeated reading and analysis of the recorded data was used to extract common and divergent themes from the material. A number of similar themes emerged within both the clients' and clinicians' perspectives of the reasons for DSH, which included affect regulation, communication and self-hatred. Clients and clinicians both viewed DSH as an individual's urgent attempt to regain emotional control, and reduce anxiety and tension when they feel overwhelmed. Both groups also regarded DSH behaviours as being partly due to the person experiencing feelings of self loathing, guilt and low self-worth. There were however, discrepancies in what importance clients and clinicians gave various reasons for DSH. In particular, clinicians viewed DSH as sometimes being an effort to manipulate

or obtain care from others, whereas clients did not feel this was an accurate explanation. Their perspective was that clinicians are often absorbed by the risk and the effect that the DSH has on them (clinicians) and the busy health service that they minimise client distress which clients stated very strongly is the predominant motivator for them harming themselves. In conclusion, there was significant agreement regarding some of the reasons for and associated factors of DSH; however clinicians and clients regarded the predominant motivating factors differently. This discrepancy may well hinder the relationship between clients and clinicians which in turn may affect the relevance and efficacy of the care they offer.

Keywords: *deliberate self-harm, suicide, risk factors, motives, distress*

Cognitive, psychomotor and personality predictors of self-reported driving behavior

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In previous studies the predictive relevance of various driving-related abilities and personality traits mostly has been studied in isolation. The aim of the present study was to investigate the usefulness of combining various driving-related abilities and personality traits in predicting self-reported driving behavior, i.e. traffic violations, and errors. A total of 116 (52 females and 64 males) lay drivers, aged between 20 and 57 years ($M = 33$ years) participated in this study on an unpaid voluntary basis. Most of the participants (68.10%) were accident-free drivers, and only 12.9% had been engaged in two or more traffic collisions during the last three years. The respondents completed a test battery made up from the six computerized measures derived from Vienna Test System (Schuhfried, Austria) measuring decision speed and physical motor speed, perceptual speed, selective attention, eye-hand coordination ability and reactive stress-tolerance, and a subjectively accepted level of risk in traffic situations. Four subscales of NEO-PI-R (McCrae & Costa, 1992) were used to measure driving-related personality traits of

excitement-seeking, impulsiveness, dutifulness and discipline. Driver Behavior Questionnaire (DBQ, Reason et al., 1990; Austers & Renge, 2007) was used as a self-reported measure of traffic violations and errors. The incremental validity of mentioned potential predictor variables was investigated by means of a hierarchical regression analyses. The results of the hierarchical regression analyses revealed that excitement seeking and being male predicted DBQ traffic violation score, whereas DBQ errors were predicted only by discipline personality trait. The findings of this research confronts the usefulness of the implications of cognitive and psychomotor abilities measures for driver assessment, at least in the assessment of relatively young, healthy and 'successful' drivers, who are not the representatives of the 'problematic driver group'. These conclusions should be carefully examined in future research investigating the predictive power of the analysed predictors in different age groups and in the group of traffic offenders.

Keywords: *driving skills, personality traits, driving behaviour, excitement seeking, gender*

Collaborative evaluation of a school based water conservation program

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A school-based water saving education program, provided by cooperation between government owned water businesses, used a specially designed Behaviour Change Framework to target behaviour related to water saving objectives, including proposed improvements in the knowledge, attitudes and behaviour of both students and teachers. The evaluation program consisted of questionnaires distributed by trained teachers and program support officers who issued and collected surveys pre and post program participation. The program was conducted from 2006-2009 and included ongoing consultations with a diverse range of program stakeholders to enable continuous refinement of the program and its evaluation. In total 1,905 primary, 513 secondary, 73 special school and 109 teachers participated in the evaluation. Sound benchmarks have been set for knowledge levels and attitudes to saving water;

however attempts to assess behaviour change have been problematic due to reliance on measures of self report. Significant improvements were found in: 1) knowledge of the causes of water shortage including climate change; 2) knowledge of water use and saving methods in school and at home; and 3) primary and special school students undertaking more water saving actions than secondary students and teachers. Attitudes about the importance of saving water were high pre-program and remained high at follow up. School based behaviour change programs can effectively improve knowledge about water shortage and methods for saving water. Consultations in the evaluation process were critical to its success and usefulness of outcomes for ongoing program improvement. Further refinements to evaluation issues need to continue in order to improve the methodology and verify self report behavioural data from teachers and students and to engage the full range of stakeholders.

Keywords: *attitudes, behaviour change, water conservation, schools*

Communicating change in educational organization

NORHAFEZAH YUSOF, N. (UUM), HASHIM, R.A (Educational Studies, CAS, UUM), ABDULLAH, S.S (Educational Studies, CAS, UUM), RAHIM, F.A (Educational Studies, CAS, UUM), WAN ZALINA, W.Z (Educational Studies, CAS, UUM), NORDIN, H. (Educational Studies, CAS, UUM)

The objective of this study was to investigate the experiences of communicating change i.e., introducing a new method into the educational setting. The methods used are observations and interviews. Data were analyzed using Five Key Change Sentiments suggested by Armenakis and colleagues (2007). The findings suggest that strong belief in Project Based Learning (PBL) effectiveness, principals' supports and parents' blessing are eminent factors which support change in the organizations. Future research in the Malaysian setting needs to be aware of the high resentment of change among teachers due to immense pressure of exam-oriented culture in the nation.

Keywords: *change, educational institutions, Project Based Learning, exam-oriented culture*

Community counseling model viewpoint: A study of the status and difficulties of the Suicide Attempters Crisis Intervention Service in Taiwan

CHING-TENG, Y. (Nanhua University), JIN-LIN, Y. (Nanhua University)

The most basic goal of public health is to prevent the occurrence of disease, preventing the disease from causing pain, inhibiting function and disabling. The community counseling model also emphasizes that prevention is important. This study shows that the 40%-60% of suicide deaths have never made prior attempts at suicide. The community counseling model advocates the provision of a case service that reaches out to the high crisis group as a practical strategy to prevent suicide. The aim of this research is to evaluate the suicide attempters' crisis intervention service status in Taiwan, and discuss related difficulties. The main research method of this study is purposive sampling. The study used purposive sampling method, tracking services for three months by using the records of cases which were further supplemented by counselors' understanding of the situation studied. In addition, the use of these services before and after the given case (measured by the Beck Hopelessness Scale) was also measured, providing a total of 20 cases before and after the test and follow-up. The results showed that women attempted suicide cases were approximately double that of men in, especially for individuals aged 30-39 years old. In relation mental problems, the case study revealed that 62% suffered from depression or bipolar disorder, in line with trends found abroad. Personality disorders account for 19%, and those with no disturbed mental disorders accounted for 19%. The results show that over 85% of cases suicide occurred within three months of the crisis situations. The Beck Hopelessness Scale was used for case screening before and after the crisis, crisis cases referred by the high drop crisis or no crisis low was 76.9%, $t=3.412$, $p<.002$, where moderate a crisis situations were 25%. The intervention was found to improve cases in the suicide crisis. In addition, another study has found that the case of

depression and bipolar reoccur again after a suicide intervention in crisis situations more so than schizophrenia and personality disorder cases. Studies have shown that timely and intensive intervention against suicide attempts can effectively reduce the suicide crisis, but can also be a helpful suicide prevention strategy. To better manage suicide prevention, there is a need to meet legal policy, and a need for improved professional human resources. The evaluation of this program expects to provide practical guidelines for future reference, from a prevention and mental health viewpoint. At present, this research found that: (1) Taiwan focused on medical services but not on a community model service; (2) the suicide preventive service uses “hotlines” and public education primarily, however these remain to be not readily accepted as suicide crisis intervention services; and (3) this trend is closely associated with the development of local mental health policies and resource allocation.

Keywords: *Taiwan, community counselling, suicide, Suicide Attempters Crisis Intervention Service*

Community identity and perceived legitimacy for managers of commons: A study on social governance in Japan

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Consistency among the evaluations of actors who have the right to decide on public policies that affect the interests of diverse people is an important premise for social governance. Confusion is particularly likely in decisions on who are legitimate managers of common resources, because many actors with a wide range of interests and beliefs participate in managing the resources. In the present research, legitimacy is defined as the approvability of the rights of others and the self to participate in the management of common resources, and a distinction is made between perceived legitimacy and institutional legitimacy. The former, based on individuals' subjective estimation, is assumed to be affected by various determinants like trust, whereas the latter is legitimized by legal assurances. Actors who are viewed by community members as holding a

higher community identity are expected to consider the public interests of the community on the whole more seriously. Such an actor is hypothesized to receive approval for perceived legitimacy as a manager of common resources. A questionnaire survey was conducted with about 500 residents in a community wherein the coastal sea area has been utilized as a sight-seeing and fishery resource. Three kinds of actors, local civil servants, members of a fishermen's union, and other general residents of the community took part in decisions on policies for the management of sea resources as commons. Their perceived legitimacy and prediction of other actors' community identity, trust in those actors, expectations for them to place priority on public interests, and other factors were measured on 5-point scales. The results showed that certain kinds of factors, including community identity, determined the perceived legitimacy of rights of the 3 respective actors to manage the sea resources. The prediction of others' community identity among various actors is thought to be important in determining their perceived legitimacy to decide policies on managing common resources. These findings showed several determinants of perceived legitimacy for governance systems for the appropriate preservation of commons. Distinctions between perceived and institutional legitimacies and the effects of community identity on perceived legitimacy are discussed theoretically and practically.

Keywords: *common resources, actors, perceived legitimacy, institutional legitimacy, community identity*

Comparative appraisal of motivational objects as the work motivation diagnostics instrument

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The aim of this study was the elaboration and standardization of a new method, which could help to evaluate and forecast work motivation. The main purposes for elaboration were practice necessity and operational validity increasing. This research used an in-group design and consisted of 3 stages: elaboration, approbation, standardization. Participants were instructed to

compare 15 motivational objects (J. Nuttin) with each other using 3 graphical two-dimensional spaces. They did it step by step putting motivational objects markers in the frame of axis. Generalized R.A. Emmons's scales of personal striving assessment were used as the axes. Elaboration results were 15 motivational objects and 6 generalized R.A. Emmons's scales of personal striving assessment, organized in 3 two-dimensional spaces. Approbation results were 47 regression equations where depended variables were 47 widely used motivational scales, independent - Euclidian distances between motivational objects. As such, the standardization of the method is proceeding.

Keywords: *work motivation, standardization*

Comparison between combine EMDR and drug with drug only in reduction symptoms and severity of obsessive compulsive disorder

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This study was a comparison between the effects of combine eye movement desensitization and reprocessing (EMDR) and drug, with drug only, in the reduction of symptoms and severity obsessive compulsive disorder. Thirty patients that were assessed as suffering OCD by a psychiatrist were divided in two groups randomly (experimental and control groups). All subjects have been tested by Maudsley obsessive compulsive inventory (MOCI) and Yale-Brown obsessive-compulsive scale (Y-BOCS). The experimental group learned EMDR and across 8 weeks, when they experienced disturb thought, used EMDR without compulsive behavior. During the 8 weeks, the control group just used drugs. Results showed a significant reduction of symptoms and severity of OCD in both groups but in the experimental group, the reduction was more effective and significant. Thus, to conclude, although EMDR has been used for PTSD symptom reduction, the present study revealed that this technique is also effective for the reduction of symptoms and the severity of OCD.

Keywords: *Eye movement desensitization and reprocessing (EMDR), Obsessive compulsive disorder*

Comparison of athletes' study strategies between special sport event groups and general groups

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The purpose of this study is to explore the differences of learning strategy between the same sport event athletes and general athletes, as well as to explore the differences of learning strategy between the different sport event athletes and general athletes. A cross-sectional design was used. We adopted the Secondary School Student Study Strategy Questionnaire to collect data. The questionnaire consisted of 56 items and three dimensions. The internal reliability was satisfied. We recruited 140 participants for the study. The results showed: (1) There are significant differences in cognitive strategy and goal management strategy among different level athletes in the same event-group; (2) Significant differences are found in three dimensions of the study strategy among different event-group athletes. It was concluded: (1) The cognitive strategy is different among different levels of the athletes; (2) The learning strategy is different among different athletes.

Keywords: *learning strategies, sport, athletes, cognitive strategy*

Comparison of classical test theory and item response theory in developing knowledge tests for Croatian national assessment

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The aim of this paper is to compare Classical Test Theory (CCT) and Item Response Theory (IRT) and to show benefits of using IRT approach in knowledge-test development. In the international project which aimed to develop instruments for Croatian national assessment,

Mathematics and Croatian language tests were pretested. The samples consisted of 1100 gymnasium students. After the pre-test, CTT and IRT parameters were calculated. In analysis of results we used TiaPlus software (Heuvelmans, 2008) for CTT and OPLM software (Verhelst, Glas & Verstralen, 1995) for IRT analysis. OPLM is a model where difficulty parameters are estimated and discrimination indices are imputed as known constants, which is an extension of the Rasch model. Two types of item statistics were compared: item difficulty parameter (b) from IRT model with CTT item difficulty p value and IRT item discrimination parameter (a) with CTT item discrimination index. Choice of the main-test material was done according to the results of psychometric analysis. Pearson correlation indicated that there were considerable similarities between the item statistics obtained through CTT and IRT. Information functions calculated in OPLM were helpful when deciding which of the items with similar CTT parameters were better. Results of CTT and IRT analysis were dominantly consistent. IRT parameters were especially useful for detecting some differences between items that had very similar CTT parameters. When developing knowledge tests it is strongly recommended to use both test theory approaches.

Keywords: *Classical Test Theory, Item Response Theory, national assessment, knowledge tests*

Comparison of sport orientation on athlete teachers in all of the Iran

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Athletes, who participate in activities and athletic competitions, have different motives and possibly different sport orientations. So the purpose of this study is to perform a comparative study on sport orientation of athlete teachers in all of Iran. For this purpose 213 athlete teachers (113 males & 100 females) were selected as subjects. Individual characteristics such as gender; sport field (individual or team); and recorded medals were questioned in the beginning. Then to measure sport orientation, Gill's Standard Sport Orientation Questionnaire-1988 (SOQ) was used

in order to measure this phenomenon in three aspects of: competitiveness; winning; and goal orientations. After translation of the original questionnaire and consulting with eight physical education (PE) and social science faculty members, it was used in two pilot studies, and its reliability was estimated through the method of Cronbach Alpha Coefficient ($r = 0.88$). The data were analyzed by using r (Ata's coefficient of correlation), chi-square and an ANOVA test, at the level of $p \leq 0.05$. The results of this study indicated the following matters; the priorities of sport orientation of athlete students were accordingly, 1. Goal setting; 2. Competitiveness; 3. Winning Orientation. However, there was no significant difference in the priority of sport orientation among athlete teachers with regard to; gender, sport field (team or individual), and recorded medals. For a more careful comparison and further recognition of sport orientation, more investigations among different levels of athletes are required.

Keywords: *sport, competitiveness, winning, goal setting*

Compensatory self-enhancement as a solution of the multiple audience problem

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The multiple audience problem (e.g., Fleming, 1994) is the difficult self-presentation situation in which someone is faced with two or more "audiences", simultaneously wanting each audience to form or preserve a different impression of him/her. Generally, people are often confronted with this problem, but they can't resolve it effectively. According to Kasagi and Daibo (2009), participants who confronted the multiple audience problem showed compensatory self-enhancement; if the audience has formed an unfavorable impression of them, people will try to counteract that impression by presenting new and highly favorable information about themselves, which may compensate for the bad image. But, the effectiveness of the compensatory self-enhancement as a solution of the multiple audience problem has not been explained. So, this study examined the effect of compensatory

self-enhancement on the multiple audience problem. Participants were randomly assigned to the multiple audience condition or the control condition. Also, they were randomly assigned to the compensatory self-enhancement possible condition or impossible condition. Then, they spoke in front of the video camera to impress others who would watch this video. After the participants spoke in front of the video camera for 3 sessions, participants completed the state self-esteem scale. As we predicted, the results revealed that participants in the multiple audience condition/ the compensatory self-enhancement impossible condition reported the lowest state self-esteem scores than any other condition. Thus, when we can't do the compensatory self-enhancement, our state self-esteem would decline. So, the effectiveness of compensatory self-enhancement as solution to the multiple audience problem was demonstrated.

Keywords: *self-enhancement, multiple audience problem, self-esteem*

Competence makes a difference: Examining the interactive effects of social contexts, gender, and relative status on our liking towards a cold person

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Warmth and competence are the centralities underlying our person perceptions and interpretations of other's behavior. From an evolutionary perspective, intention is evidently able to alter our perception judgment of others, either foes or friends. This study investigated whether competence level would interact with such interpersonal relation factors such as status and competition, in influencing people's liking towards one who was perceived coldly. A sample of 655 participants ($M = 25.2$ yrs, $SD = 9.0$), recruited from company, university, and church groups, partook in this research with two experiments. Participants were, on each sample basis, randomly presented with one of four versions of vignettes, used to illicit their liking

opinions towards the target person according to a seven point scale. Protagonists characterized by a low warmth trait, were manipulated throughout the vignettes. Experiment 1 used a troupe vignette with a 2 (same vs. superior relative status) \times 2 (gender) \times 2 (high vs. low competence) factorial design, whereas experiment 2 was based on a 3 \times 2 \times 2 factorial design, replacing only the gender variable with three vignettes varying in the characteristic of task orientations, but corresponding to each sample group's social context. In experiment 1, high-competent (HC) targets were rated significantly more likeable than their low-competent (LC) counterparts across both genders by all, but the church group, for the female targets, regardless of the relative status imagined by the perceivers. Higher likeness score was found awarded towards the HC target person when judged from the superior- ($M = 4.8$) than the same-status positions ($M = 3.6$). This result was replicated in experiment 2, with an average score of 4.6 for the former and 3.7 for the latter. Also, a significant vignette, competence and group main effect appeared as expected. The results show exactly the same pattern in either of the status relations. All participants, except the church respondents in the church story, consistently reported liking others with HC more than LC. Competence's η values fell between .118 and .286. To conclude, Taiwan is generally identified culturally as a collectivistic society, thus, one lacking in warmth is particularly unflattering in interpersonal interactions. It is nonetheless demonstrated that HC, in ecologically relevant and irrelevant social contexts, has an enhancement effect on liking perceptions in this study.

Keywords: *warmth, competence, perceptions, interpersonal factors*

Computing common effect sizes and their asymptotic sampling variances for meta- analysis in structural equation models

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Structural equation modeling (SEM) has been proposed as an alternative approach to conduct meta-analysis. Univariate and multivariate meta-analyses can be conducted within the SEM

framework. One limitation, however, is that effect sizes and their approximate standard errors have to be estimated outside the SEM framework. This study further extends the SEM approach to compute common effect sizes and their standard errors. It shows that SEM can be used as an integrated approach to estimate effect sizes and to conduct meta-analysis. This makes the current SEM approach more appealing to meta-analysts. Several Monte Carlo computer simulations were conducted to evaluate the accuracy in estimating the effect sizes and their standard errors. These effect sizes included (1) raw mean difference and standardized mean difference for independent groups; (2) standardized mean difference of repeated measures; (3) proportion and logit; (4) log of odds ratio; and (5) log of risk ratio. The relative percentage bias of the parameter estimates and their standard errors were used to evaluate the empirical performance. The relative percentage bias of the parameter estimates and the standard errors was reasonably small. Results indicate that the SEM approach is accurate in estimating the effect sizes and their standard errors. This study shows that SEM can be a useful framework in estimating effect sizes and their standard errors. SEM can be used as a favorable approach to conduct meta-analysis.

Keywords: *structural equation modeling, meta-analysis, effect size, standard error*

Construction and co-construction of knowledge in scientific inquiries

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The purpose of the study was to explore the knowledge construction processes in scientific inquiry. We predicted that knowledge construction in science is an act that involves extensive and creative conceptual combinations. Conceptual combination refers to creation of a meaning that links two, or more than two, concepts together. How conceptual combination occurs to produce the scientific breakthroughs was the target of the study. Twenty scholars (professors, and research and development (R&D) workers) in science or technology were interviewed. They were asked to use one of their studies as a case to explain how the research

idea emerged, how the study was performed, how they conquered difficulties in the research process, and how they evaluated achievements of the study. The content of their reports was analyzed to extract variables facilitating or hindering their creative processes. Qualitative analysis of data revealed that conceptual combinations occurred at every stage of scientific knowledge construction. Scientific investigation involves three distinctive tasks: mapping a conceptual structure to the observed data structure to extract a research problem, importing an explanatory knowledge structure to account for the discrepancies between the current knowledge and observed anomalies; and mapping or creating a logical-mathematical structure as a guide to gather evidences to test hypotheses. At every step of the inquiry, importing knowledge from other researchers is the key to obtain ideas for conceptual combination that eventually led to emergence of new knowledge. Scientific inquirers share a common feature: seeking and applying a knowledge structure onto another knowledge structure with an aim to create a new knowledge structure. Knowledge necessary for scientific breakthroughs is distributed among scholars. Although the emergence of a new knowledge structure comes from the working of an individual mind, its antecedent condition is importing knowledge from other scientists. Thus, scientific knowledge is co-constructed, rather than constructed solely by individual scientist.

Keywords: *knowledge construction, scientific inquiry, science*

Construction and standardization of dormitory adjustment questionnaire (DAQ)

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The aim of this research was based on making a specific psychometric tool for evaluating the dormitory adjustment of university students in Tehran, Iran. Two major aspects of the questionnaire, its reliability and validation, were evaluated through this study. The statistical

population of the research comprised of dormitory students from Tehran's universities. For this purpose 929 females and males, with consideration of their ratio, were randomly selected by a multi-steps method from Allameh Tabatabaie, Shahid Beheshti and Tehran Universities. Regarding the theoretical bases and principles of questionnaire construction, the dormitory adjustment questionnaire (DAQ) was designed and carried out passing three steps. The information gathered from the final examination was analyzed by statistical psychometric methods. The reliability of the questionnaire was evaluated using the inner consistency ($\alpha = 0.88$) and retest methods ($r = 0.77$). Factor analysis was used for validation. The results showed that the extracted factors explained 51% of questionnaire variances. The scores were standardized separately for both males and females (T and Z scores). A novel questionnaire for the evaluation of dormitory adjustment of university students was designed and standardized.

Keywords: *Dormitory Adjustment Questionnaire, university students, psychometric tests, dormitory adjustment, Iran*

Construction of IRT scales for the Five-Factor personality scale in Japan and examination of the short-form of the scale

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In Japan, personality scales based on the Five-Factor model, especially the Big-Five scales using personality trait adjectives are common (Wada, 1996), and have been often used in many studies. A short-form of the Big-Five scale was constructed. To avoid changes in the capacity dimension caused by the decrease in the number of items, item selection was conducted after Item Response Theory (IRT) scales were constructed for all the items. Then, the reliability and validity of the short-form of the Big-Five scale were examined. Data was collected from participants ($n = 3612$). A Generalized Partial

Credit Model was applied to the IRT model, and items were selected using the Slope and Location parameters for each item. Reliability of the short-form was assessed using Cronbach's alpha, while its validity was determined using correlation coefficients. Cronbach's alpha showed that the short-form as well as the five sub-scales had sufficient reliability as a personality test. Moreover, considerably high correlation coefficients were obtained for all the sub scales. It was confirmed the short-form functioned sufficiently. It is suggested that further examination of its validity should be conducted.

Keywords: *big five model of personality, reliability, validity, Japan*

Consumer-based brand equity: Comparisons among convenience goods and shopping goods

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Private label, also store brand, is the brand which retailers are responsible for promoting, shelf placing, pricing, and positioning its own brand in the product space. In view of the differences between globalised and localised images, this research groups the private labels (PL) into two categories, that is, the international PL (IPL; e.g. American Costco and British Tesco), and the local PL (LPL; Taiwanese RT-Mart). The research purpose is to realize the consumers' different perceptions toward convenience goods and shopping goods on international private labels and local private labels. This research investigated the consumer perceptions towards convenience goods and shopping goods on product quality, price, brand leadership and brand personality based on international private labels and local private labels. The data was collected outside the entrances of the main rail station of Taipei, Taiwan. A systematic sampling was adopted and 254 questionnaires were eventually collected. The findings revealed that the consumers in Taiwan perceive that hypermarkets, including international hypermarkets and local hypermarkets, produce

better convenience goods than shopping goods that have high quality and deliver more value. For price, brand leadership and brand personality, on the whole, international private labels and local private labels were not perceived significantly differently. There is little research distinguishing international private label and local private label from private labels. Our findings indicate that consumers have different perceptions of these two brand types. This calls for marketers to exploit the opportunities in these segments. Finally, implications for leisure practice and further research are discussed.

Keywords: *international private label (IPL), local private label (LPL), consumer perceptions, Taiwan*

Contextual barriers and career choice goals in Greek mid-adolescents

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The purpose of this study was the investigation of basic psychological predictors of career choice goals in mid-adolescents according to the Social Cognitive Career Theory (SCCT; Lent, Brown, & Hackett, 1994, 1996, 1998, 2000). The first goal of this study was the investigation of possible relationships between Career Contextual Barriers and Career Choice Goals. Further, we intended to investigate the moderating role of Contextual Barriers between Interests and Career Choice Goals. Finally we investigated the moderating role of Contextual Barriers between other SCCT variables (Self-Efficacy, Outcome Expectations) and Career Choice Goals. The sample consisted of 500 10th-grade Greek students from a representative area of Thessaloniki, Greece. Measures included the "My Perceptions of Barriers" Questionnaire (McWhirter, 2000: see revised version of Gibbons, 2005), the Self-Efficacy Measure (Gore & Leuwerke, 2000), the Outcome Expectations Measure (Gore & Leuwerke, 2000), the Vocational Interests Measure (Gore & Leuwerke, 2000) and the Choice Goals Measure (Gore & Leuwerke, 2000). Results are discussed in relation to the design and the implementation of a career counseling program, which focuses on coping with career barriers and setting career

choice goals in adolescents who are at risk of choice failure. Conclusions include the practical implications of the SCCT model in Greek adolescents.

Keywords: *contextual barriers, career choice, Greek, psychological predictors, career counselling*

Contingent employment as invisible diversity and its influence on work attitudes

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For organizations to remain competitive in a global market, factors including diversity within organizations and the use of alternative employment arrangements have become critical dynamics. There are two common types of diversity: visible diversity (characterized by surface traits including age, gender, and race), and invisible diversity (characterized by diversity in thought, values, and experiences). This study examined one type of invisible diversity, namely contingent employee status. Contingent employees are typically employed part-time, seasonally, via contract, or on a temporary basis. These individuals often work in the same environment, carry out comparable job tasks, and serve the same goals of the organization as traditional full-time employees. Unfortunately, research in the area of contingent employment has been scarce, due to the short term and/or transitory nature of their employment. Contingent employees seldom receive the same indoctrination and/or socialization as traditional employees. Based on a social identity approach, contingent employees may experience out-group dynamics that can influence work attitudes differently than traditional employees. This study examined attitudinal differences between traditional and contingent employees, utilizing a unique sample of over 900 personnel assigned to a major U.S. Navy seagoing command with over 30 ships. The sample included traditional employees, as well as individuals who worked within, but were not directly employed by, the organization (contingent employees). These two types of personnel work in the same physical environment, share the same goals, and conduct

comparable tasks. After controlling for rank and common method variance, the results suggest that, compared to contingent employees, traditional employees harbor greater organizational trust ($F(1,817) = 4.87, p < .05$) and perceive greater leadership cohesion ($F(1,205) = 2.14, p < .01$). No between-group difference was found for level of job satisfaction. The results of this study can help guide on-boarding and socialization processes that form the initial social bases from which attitudes are developed. Understanding the interpersonal dynamics that occur—based on employment type—can help inform research and practice about how invisible diversity can powerfully influence the job attitudes of organizations' employees.

Keywords: *visible diversity, diversity, employment, job satisfaction, work attitudes*

Contributing factors to rail incidents and accidents

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The study was undertaken to determine the human errors and violations, as well as the local and organisational factors involved in rail accidents in Australia over a ten year period. The focus of the study was the associations between factors and determining the relevance of some human performance concepts to different error types in an applied setting. The Contributing Factors Framework (CFF), a tool developed for the analysis of rail accidents and incidents, and based on James Reason's model of organisational accidents, was used to gather aggregate data about the factors that have contributed to a sample of investigation reports. In addition to applying the CFF, a more detailed categorisation of errors was utilised. Ninety-six investigation reports into Australian accidents and incidents occurring between 1999 and 2008 were analysed. Each report was coded independently by two experienced coders. Task demand factors were significantly more often associated with skill-based errors, knowledge and training deficiencies were significantly associated with mistakes, and violations significantly linked to social environmental factors. Furthermore, the organisational factors

of risk management, functionality of equipment, and adequacy of procedures were found to be key contributors within this sample. The results of this study provide information about what factors may influence individuals to make errors or commit violations; a finding that may be applicable across industries and contexts. Further, systemic issues relating to accident causation generally have been identified for remediation. Finally, the CFF has been shown to provide a useful methodology for the collection of data associated with rail incidents and accidents in Australia.

Keywords: *rail incidents, organisational accidents, human errors, organisational factors, Contributing Factors Framework*

Coordination between departments in organizations: Examining individual and departmental characteristics

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An organization is constructed from departments with different job characteristics. Conflicts between the departments are caused because they often have different interests. To achieve organizational goals, it is crucial to resolve conflicts and to coordinate between groups and teams. The object of this study was to examine individual and departmental characteristics influencing coordination and communication between departments in an organization. The target organization was a Japanese building maintenance company. Before the main research, a preliminary interview was conducted to explore job contents and the relationship between departments. Based on the result of the interview, the main research was implemented as follows. Two hundred and seven employees belonging to seven departments answered the questionnaire about their department and individual characteristics. Questions about individual characteristics asked about understanding organizational goals, individual empowerment and communication with members in other departments. Questions about their departments asked about leadership of managers in their department, group empowerment and coordination with other

departments. To examine individual and departmental characteristics, and leadership influence on coordination between departments, hierarchical multiple regression analysis was conducted. Understanding organizational goals and individual empowerment was significantly related to communication with members in other departments. Employees who understood company policies and were empowered actively communicated with members in other departments. As for department characteristics, leadership of managers and group empowerment was related to coordination with other departments. Leadership encouraging cooperation with other departments and high group empowerment was associated with high coordination. The results of this study suggest that one factor promoting the coordination might be that employees are interested in organizational goals, and not only their own task goals. Awareness of superordinate goals above individual goals may lead to coordinating behavior with other departments. This study also showed that individual empowerment and group empowerment have important roles in coordination and communication between departments in an organization. Empowerment may be derived from productive activities by employees, as suggested by previous research. Furthermore, results also suggest that leaders have influence on members' coordinating behaviors with other departments.

Keywords: *organisation, coordination, departmental characteristics, organisational goals, communication*

Correlates of eating disorder, anger and depression among working women

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In a developing country like India, in addition to a dual career, women in the information technology (IT) industry have to work under various shifts, which induce specific traumatic and unpleasant situations which may lead to loss of job, illness, bereavement and marital disharmony or divorce, which will be the leading cause of the global disease burden. As per the literature and societal mapping, it can be observed that stress at work for the working

women is the result of working style, inadequate food consumption, perceived anger and depression. It was aimed to study the interactive phenomenon of shift work, eating disorders, anger and depression among the working women and to compare them with their male counterparts. A purposive sampling technique was adopted in the study comprising of 80 employees, all below 30 years of age. Employees who are working in business process outsourcing (BPO) and employees who are working in other organizations were selected for the study. Out of the 80 employees, 40 were from call centers and 40 from other organizations (i.e. 20 of them males, and females, for each group). The data were collected through the questionnaire package comprising the state trait anger expression inventory (STAXI), Beck Depression Inventory and Eating disorder Inventory. An SPSS package was used for analysis. The results show that women in BPOs do have eating disorders and experience more anger and depression than their counterparts. Women employees working night shifts do experience more depression and anxiety than male employees. To conclude, night shift induces eating disorders, which in turn significantly influences both depression and anxiety.

Keywords: *night shift, gender, eating disorders, depression, anxiety*

Counterfactual thinking improves TTCT performance

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Counterfactuals are thoughts of what might have been. Previous research has indicated that counterfactual thinking has a preparatory function. This function plays a role in behavior regulation and performance improvement. The purpose of this study was to explore the impact of counterfactual thinking on creative thinking, in order to clarify the contribution of prepared function of counterfactual thinking for creative thinking. One hundred and four University of Peking University students completed this study and were paid 10¥ for their participation. Participants were asked to finish a sequential

priming paradigm called the sentence completion method in order to prime counterfactual thinking, and then completed the Torrance Test of Creative Thinking (TTCT) (Torrance, 1965, 1984) to measure creative thinking. ANOVA results showed that counterfactual thoughts helped participants to complete the TTCT. Counterfactual thinking had different effects on the three dimensions of creative thinking, namely originality, $F(2, 102) = 3.48, p < .05$; fluency, $F(2, 102) = 8.02, p < .001$, and flexibility, $F(2, 102) = 4.12, p < .05$. The priming effect depended on test type (Unusual Usage Test and Figure Structural Test) in the TTCT. Counterfactual thinking improved TTCT performance in originality, fluency, and flexibility dimensions in Unusual Usage Test, which is linguistic, and only improved TTCT performance in the originality dimension ($F = 4.02, p < .05$) in the Figure Structural Test, which is geometric. We conclude that counterfactual thoughts not only reconstruct the past but also influence the future by affecting performance on new tasks.

Keywords: counterfactual thinking, TTCT, behavior regulation, performance improvement, creativity

Counterstrike strikes back? How Shooter players are perceived

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In Germany, violent digital games are discussed to be strictly censored. Motivation for censorship strives by school shootings in Erfurt and in Emsdetten. Both assailants had spent much of their time playing violent digital games, particularly first-person shooter games like "Counter Strike" or "Wolfenstein". This observation fuelled an intense public debate about the effects of violent digital games on aggression. Since the recent school shooting in Winnenden in March 2009, where 15 people and the assailant died, this debate was extended. The relationship between school shootings and violent digital game playing, particularly shooter playing, seems to be obvious. Therefore, the question arises of whether this relationship only exists between aggression and the games or if even the shooter players are associated with

higher aggression. Our two studies are concerned with person perception, particularly how shooter players are perceived. Study 1 investigated differences between computer players and nonplayers concerning judgements ($N = 66$). Players' and nonplayers' person judgements were recorded after reading a description about a person who regularly played either car racing or shooter games. The only effect found was for nonplayers. They associate shooter games with aggression and therefore perceived the shooter player as more aggressive than any other condition. In study 2 we focussed on nonplayers' person perception ($N = 60$): Participants watched a 4 minutes video tape showing a person playing a computer game. Afterwards they described the gamer in their own words. We found differences in person perception concerning information about what computer game exactly, the person had played. To conclude, violent digital games seem to influence the perception of shooter gamers resulting in an aggression bias. This bias in person perception might be due to the cognitive association between shooter gamers and aggression frequently strengthened by the relationship between school shootings and violent digital game playing.

Keywords: violent digital games, shooter games, player perception, aggression, school violence

Creativity in the work place: The role of leadership style, morale, and regulatory focus

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Given the ongoing requirement to remain competitive, both public and private organisations face ever increasing challenges for continuous improvement in their business practices (Dunphy, Griffiths, & Benn, 2007). In times of scarce resources and high competition, leveraging creative talent provides competitive advantage. Theoretically, leadership style exerts an enhancing effect on creativity directly, as well as on morale which, in turn, also affects creativity (Hirst & Mann, 2004; Thompson, 2003; Wilson-Evered, Dall, & Neale, 2001). Specifically, this study hypothesised that stable and

innovative leadership styles are associated with creativity. We expected that morale would mediate the relationship between stable leadership and creativity (hypothesis 2a) and also the relationship between innovative leadership and creativity (hypothesis 2b). In addition, regulatory focus was expected to moderate the relationship between leadership style and creativity: where a high degree of regulatory fit between leadership style and regulatory focus is present, increased creativity should result. Specifically, a prevention regulatory focus was hypothesised to moderate the relationship between a stable leadership style and creativity, with the relationship stronger at higher levels of regulatory fit between prevention focus and stable leadership (hypothesis 3). Similarly, a promotion regulatory focus is hypothesised to moderate the relationship between an innovative leadership style and creativity, with the relationship stronger at higher levels of promotion focus (hypothesis 4).

Keywords: creativity, leadership style, regulatory focus, stable leadership, innovative leadership

Critical incident stress among Japanese journalists (1): Job-related traumatic event and mental health

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The effect of traumatic incidents at work on disaster workers, such as firefighters and policemen, has been demonstrated in previous works (e.g. McFarlane, 1988; Nurmi, 1999). More recently it has been noticed that journalists who are exposed to traumatic emergency situations may be at risk of mental health problems. Several previous studies in other countries have reported that journalists suffer from traumatic stress (McMahon, 2001; Pyevich, Newman, & Daleiden, 2003). Therefore, job-related traumatic stress experienced by journalists in Japan and factors contributing to them were investigated. In Study 1, questionnaires were administered to 149

broadcasting journalists in managerial position and 211 broadcasting journalists in non-managerial positions, such as reporters and camera operators. In Study 2, questionnaires were administered to 102 newspaper journalists in managerial position and 291 newspaper journalists in non-managerial positions. The questionnaires included items concerning the most traumatic event experienced at work, Japanese-language version of the Impact of Event Scale Revised (IES-R), the 12-item Japanese version of the General Health Questionnaire (GHQ-12), and scales designed to measure predictors of current posttraumatic stress symptoms, such as stress reactions during coverage, workplace issues and social support. The results showed that 80-90% of the respondents in both Studies 1 and 2 have had at least one traumatic experience during the course of their coverage. Of these, 8% met the IES-R criteria for potential post-traumatic stress disorder (PTSD). Journalists in non-managerial positions, especially newspaper journalists exhibited a higher IES-R score than journalists in managerial positions. The level of mental health measured by GHQ-12 in all the respondents, indicated that 40-50% of journalists in non-managerial positions met the criteria (>4) for unhealthy status, compared with 25% of journalists in managerial positions. Moreover, post-traumatic stress reactions at the time of the survey were strongly related to symptoms of stress experienced on-site, or relatively early in the course of the stressful assignment. These findings suggest the need for implementing a program for reducing stress induced by critical incidents in Japanese journalists, especially journalists in non-managerial positions.

Keywords: critical incident stress, Japanese, mental health, Job-related traumatic stress, post-traumatic stress disorder

Critical incident stress among Japanese journalists (2): Recognition of organizational critical stress care system

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Studies have been conducted on critical incident stress suffered by disaster relief workers such as firefighters. However, only few studies (Matsui, et al., 2006) have been conducted in Japan regarding stress experienced by journalists covering disasters. A questionnaire survey was conducted to Japanese journalists to investigate their opinion about the critical incident stress care system in the organization they belonged to. A mail questionnaire survey was conducted to journalists and photographers (non-managerial workers) and their superiors (managerial workers) from broadcast stations and newspapers. The number of valid responses of managers was 149 (recovery rate of 42.0 %) and of workers was 211 (29.4 %) for broadcast stations. For newspapers, the number of valid responses of managers was 102 (57.3 %) and of workers was 291 (30.8%). From 18.9% of newspapers workers to 40.3% of managers of broadcast stations affirmed the existence of critical stress care system in their organization. Nevertheless, the stress care system mostly consisted of labor safety and hygiene such as establishment of a clinic in the office with an occupational health physician (response from 81.4% of managers of broadcast stations.) However, only few (2-6% of) broadcast workers ($n=4$), responded that they have used such clinics. The most common reason given for not having used the clinics was the lack of stress (90.4% of broadcast station managers), while the rate of this response was 52.3% among non-managerial newspaper workers. The latter also responded "too busy to visit the clinics" 40.9% and "feeling reluctant to visit the clinics" 27.3%. There were only few responses stating that the present stress care system was "adequate" 3-6% whereas more than 50% considered that the whole organization should deal with the problems and raise the consciousness of the managers. Over 30% of the respondents stated that they would think of a way to keep in secret to managers and colleagues that they sought help. Although most journalists recognized the importance of organizational services specializing in critical incident stress, they are not available yet.

Keywords: *critical incident stress, Japan, journalists, occupational health*

Critical incident stress among Japanese journalists (3): Differences in managers' and workers' perceptions on dealing with daily job stress

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Studies on critical incident stress in Japanese journalists have just started. Preliminary interviews indicated the role of the supervisor was important in dealing with critical incident stress, and that there were close relationships between critical incident stress and daily job stress (Matsui, et al., 2006). A questionnaire survey was conducted with managerial and non-managerial journalists working for newspapers and broadcast stations to investigate how managers deal with workers' job stress. A mailed questionnaire survey was conducted with journalists in non-managerial positions, such as reporters and camera operators and their supervisors (journalists in managerial positions) of selected broadcast stations and newspapers in Japan. In broadcast stations, the number of valid responses was 149 (recovery rate 42.0%) from managers and 211 (29.4%) from workers. In newspaper companies, the number of valid responses was 102 (57.3%) from managers and 291 (30.8%) from workers. The questionnaire inquired about the communication between managers and workers and among colleagues, sensitivity of consideration given to the workers' stress by managers, and the workers' recognition of the managers' consideration. Generally, responses of the managers were optimistic and positive, whereas the workers' perceptions were different. For example, in the survey at newspaper companies, 67.8% of managers responded that the office had an atmosphere in which supervisors and workers could talk freely, whereas only 37.5% of workers thought so. Moreover, 43.2% of managers responded that they tried to reduce the job load with consideration to workers' stress, whereas only 18.4% of workers were aware of such consideration. Furthermore, 73.1% of managers responded that they tried to listen to workers and understand their feelings, whereas workers

who were aware of such efforts were only 28.0%. Results suggested that there was a noticeable difference between the perspective of managers and workers when dealing with job stress. This difference might prevent countermeasures for critical incident stress from being introduced into the work place. If appropriate social support is not given on a daily basis, it might be impossible to provide effective support in situations of critical incident stress, which could result in workplace problems.

Keywords: *critical incident stress, journalists, job stress, management, Japan*

Cross-country differences in traffic risk judgement – Norway and Ghana compared

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This study aimed to investigate differences in traffic risk judgement in a Norwegian and Ghanaian sample. This was carried out while controlling for relevant background variables, such as gender, age and levels of educational achievement. In order to obtain the core aim of the study, a self-completion questionnaire was devised and distributed to a representative sample of the Norwegian population ($n=247$) and to a stratified sample in Accra and Cape-Coast in Ghana ($n=299$). The results showed that Ghanaians judged traffic risks to be larger compared to Norwegians. Gender, age and levels of educational achievement contributed less to risk perception than country. The results indicate that the traffic environment is more hazardous in African countries with fewer regulations concerning speeding and other risk behaviours. The differences may also partly be related to differences in road and vehicles standards.

Keywords: *Traffic risk, Traffic risk, Norway, Ghana, Risk perception*

Cross-sectional study of developmental changes in the Five-Factor personality model in Japan

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Big-Five scale of Personality has become the most commonly used personality scale in Japan. However, there are only a few studies on the development of the five-factor personality, which are based on large-scale data sets. Therefore, we conducted such a study using a cross sectional design. First, we evaluated the stability of the scale's factor structure across developmental stages. Then we examined developmental changes in the mean score for each sub scale of the scale. We used both the Japanese version of the adjective check list (Big-five scale) constructed by Wada (1996) and the short-form of the same scale developed by Tani et al. (2009). Finally, we examined the validity of the short-form of the scale. Participants ($n=3612$, aged between 15 and 83 years) completed the Big-five scale. Stability of the factor structure was examined using multiple population analysis in the SEM. Developmental changes and gender differences were examined by estimated scale values in the IRT model for the participants. Results indicated the stability of the five-factor structure across age and gender. (1) Extroversion: There was no significant mean difference in age. The mean score for women was significantly higher than that of men. (2) Neuroticism: The mean score decreased with age. Moreover, the mean for women was higher than that for men. (3) Agreeableness and Conscientiousness: The mean scores increased with age and the mean for women was higher than that for men. (4) Openness to experience: There was no significant mean difference between age and the mean for men, which was significantly higher than that for women. The results for the short form and the original versions of the scale were nearly identical. The results of this study corroborated the findings of other studies, confirming the cross-cultural consistency of the five-factor structures. Moreover, the short-form of the scale had sufficient criterion-related validity.

Keywords: *big five model of personality, validity, gender differences, age differences*

CSR, authentic leadership employees' mental health and life satisfaction in Polish and French enterprises

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The author's subject of interest is the practical realisation of Corporate Social Responsibility (CSR) in the employment sphere in the aspect of employees' authentic leadership, mental health, and life satisfaction, in Polish and French enterprises. The aim of research which was carried out, was finding the answer to the following question: is there any relation between a level of CSR activities in the recruitment sphere in selected enterprises in Poland and France, and a level of the authentic leadership and employees' welfare (a level of professional burnout and health conditions – a subjective evaluation and a level of job satisfaction)? In order to verify such a research problem, 164 employees of 18 Polish medium enterprises and 84 employees of 4 French enterprises were investigated. Research tools were: the CSR activities in recruitment sphere Questionnaire (specially constructed and validated), Authentic Leadership Questionnaire (ALQ), Maslach Burnout Inventory – Human Services Survey (MBI-HSS), 12-item General Health Questionnaire (GHQ-12) and also the Satisfaction with Life Scale (SWLS) by Diener, Emmons and Larson in its adapted form. Research was carried out between 2008 and 2009. Obtained research results indicated that both in Polish and French enterprises, there is a correlation between a level of CSR practical realisation, and a level of the authentic leadership and employees' welfare (a level of the professional burnout in the emotional exhaustion aspect). It means there is a necessity to promote the CSR idea, despite differences between the countries.

Keywords: *corporate social responsibility, Poland, France, authentic leadership, employee welfare*

Cultural basis of cooperation: Comparing the achievement of Turkemen and non-Turkemen Iranian students using cooperative learning method

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The aim of the research conducted within a social constructivist framework was to show that using different methods of learning and teaching can be beneficial only when the socio-cultural prerequisites are in place. To use cooperative learning method of instruction can be effective only if the students already have a positive attitude towards cooperation. Such an attitude is more likely to exist if the learners' cultural background indicates an emphasis on cooperation. Turkemens, one of the cultural groupings in Iran, are assumed to have more of such a background than the other groupings. Two groups of participants were questioned, observed, and tested in a regular class room setting wherein the subject of English Language was taught using the cooperative learning method. The participants were all 30 students of a 7th grade class selected from among all such classes in the city of Gonbad, where the majority of the population is Turkemen, using a cluster sampling method they were subdivided into small working groups. The three measures used initially, through out, and at the end of, the course were an attitude scale, an observation list, and an achievement test, all with acceptable reliability. The collected data were analyzed using both parametric and non-parametric tests. The initial comparisons of the two groups of students revealed their lack of difference in academic standing (i.e. graded point average (GPA)) and a significant positive difference in attitude towards cooperation for the Turkemen students ($t=4.445$, $df=28$, $\alpha=0.05$). Comparison of the observational data on two groups revealed that the Turkemen subgroups engaged in significantly more cooperative behaviors during the learning sessions ($\Psi^2=12.078$, $\alpha=0.05$). The two groups' test scores indicating students' achievement in the course taught, also showed a significant superiority for the Turkemen students ($t = 2.247$, $df = 28$, $\alpha=0.05$). In conclusion, attempts have been made in Iran to introduce cooperative learning as a way of helping to improve the quality of education. However, what in these attempts has seemingly been overlooked is the cultural pre-requisites of effective use of this method, i.e. a positive attitude towards cooperation. Given the findings of this research, and the fact that attitudes are learned, it seems necessary that any attempt at using the cooperative learning method needs to be preceded by efforts aimed at improving

students' attitudes toward cooperation if the teaching method is to be fully effective.

Keywords: *cooperative learning method of Instruction, sociocultural factors, attitudes, cooperation, Turkemens*

Cultural pathways to internalization: The example of Turkish children

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This study aimed to examine internalization of maternal rules in Turkish preschool children. Research with United States (US) samples point to committed compliance, reflecting child's wholehearted eagerness to maternal agenda, as the precursor of internalization (Kochanska & Aksan, 1995). Furthermore, committed compliance appears to be associated with child's increased positive affect during mother-child interactions (Lay et al., 1989; Parpal and Maccoby, 1985; Kochanska et al., 2005). The causal chain that emerges from this literature suggests that child's positive affect experienced during dyadic relationship with the parent increases committed compliance which in turn fosters internalization. The aim of the study was to examine the applicability of this process to socialization in the relatively more collectivistic setting of Turkey. 118 children (68 boys) between 3 and 6 years old and their mothers participated in this study. The laboratory consisted of a naturally furnished room videotaped through a one-way mirror. Child positive affect, child negative affect and child compliance to mother during prohibition context were observed through typical mother-child interactions. Children's internalization of maternal rules was observed through a resistance to temptation task involving prohibited toys (Kochanska & Aksan, 1995). Videotaped interactions were coded by independent teams and kappa scores revealed adequate reliability. Committed compliance was positively associated with internalization ($r = .65, p < .01$) whereas situational compliance was negatively associated with it ($r = -.49, p < .01$). However, positive affect was unrelated to child committed compliance though negative affect

was negatively associated with it ($r = -.41, p < .01$). Regression analyses which tested the suggested causal chain revealed that committed compliance fully mediated the relation between negative affect and internalization while controlling for the effects of situational compliance. Specifically, declines in child's negative affect rather than increases in positive affect were associated with greater committed compliance which in turn predicted children's increased internalization. Results indicate an important source of cultural variation in the socialization processes. The findings suggest that unlike the US case, the factor that motivates the child to embrace parental agenda is not so much the opportunities the relationship provides to experience positive affect but rather respite from negative affect.

Keywords: *internalization, maternal rules, affect, Turkey, preschoolers*

Decision making process in work-personal life dilemmas: The case of expatriate post-doctoral researchers

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The aim of the present research was to study the decision making process when people face work-life dilemmas that can lead to work-life conflict. From the decision process theory, work-family conflict is a process. More specifically, it is an intermediate result of decisions made in the course of time (Poelmans, 2005). Young Spaniards who have recently obtained their PhD degree are frequently confronted with the decision of moving to a foreign country to continue their professional career as researchers. The specific purpose of this research project was to conduct a qualitative study of the decision making process of voluntary expatriates and their partners, and the possible relationship of this process with work-family/life balance, life adaptation and job, marital and life satisfaction. The sample is composed by 20 Spanish post-doctoral researchers who were given a grant to work in the USA at least for one year. The participants completed an online survey and were invited to participate in a personal interview by telephone. A correlational analyses of the demographic data

was developed – professional data, relationship and family data and simple specific questions on the decision making process related to applying for the grant and moving with their family or partner. These analyses showed that job, marital and life satisfaction and the implication of the partner on the decision making are related. The content analysis of the interviews shows different motives and processes depending on the specific case of the person. In general, the motives are focused on career and personal life as independent areas that can be damaged by decisions in the other. The qualitative analyses of this data suggest that this type of decision does not only affect the couple but also other relationships like friends and relatives. At this stage of their lives, decisions about applying for post-doctoral scholarships in foreign countries pose a dilemma in their personal lives and their partners' lives.

Keywords: *decision making, work-personal life dilemmas, work-life balance, post-doctoral researchers, expatriate*

Detection of driver cognitive distraction based on driving performance

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The aim of this paper is to develop a classification algorithm based on driving performance which can detect driver cognitive distraction. A modified Hidden Markov Model (HMM) was applied. Data were collected in a simulator experiment in which participants fulfilled a driving task with and without secondary tasks, respectively. Driving performance data were collected which included speed, steering wheel angle, degree of acceleration, degree of braking, etc. The results show that the HMM models were able to detect driver distraction with an average accuracy of more than 80%. Driver cognitive distraction can be detected by monitoring of driving performance. This result has potential applications in design of adaptive in-vehicle systems and evaluation of driver distraction.

Keywords: *driving performance, driver cognitive distraction, classification algorithm, Hidden Markov Model, in-vehicle systems*

Determining the relationships of age, occupational type, and educational level with sense of affective attachment to spouse in men: Attitudinal study

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The purpose of this study was to determine the relationship between age, occupation, and educational level of spouse in predicting affective attachment in men living in Shahrekord (the city in Iran). 130 married men participated in this study and completed a questionnaire assessing their sense of affective attachment with regards to the perspective of the men. This questionnaire was developed and validated by the researchers. The data was analyzed through MANOVA. The results indicate that only the level of education has a significant relationship with a sense of affective attachment in men. Men with higher education levels have higher senses of affective attachment. This result is debated with regard to special cultural issues in Shahrekord.

Keywords: *age, occupation, education, affective attachment, married men*

Development and assesment of a course program to improve mothers' child care happiness

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A six-session program was developed over three months, each session lasting two hours, for mothers of infants in order to increase the level of happiness in raising their children. We conducted this program twice with nine and ten mothers per group, respectively. A total of 19 mothers participated in the program. Differences in psychological indicators (i.e., psychological scales) such as feelings of happiness and stress in raising children, and physiological indicators (i.e., autonomic nervous activity, brain waves, salivary chromogranin) such as levels of relaxation and stress were

evaluated. These indicators were assessed before, immediately after, and one month after their participation in the course program. Similar evaluations were made on a control group of 16 mothers who did not participate in the program. Contents of the program for enhancing feelings of happiness in raising children consisted of developing relationships by talking with others about oneself, reflecting on one's feelings towards one's children, valuing happy moments in raising children, recognizing each other's hard work, affirming oneself and gaining self-confidence, making a life plan, and having others listen to one's issues. In addition, each session incorporated deep abdominal breathing and facial stretching exercises for smiling. The effectiveness of the program was revealed by the psychological and physiological effects observed. Our future task is to develop a course program that is even more effective than the one described here.

Keywords: *mothers, infants, child care happiness, raising children*

Development and validation of Tehran Multidimensional Perfectionism Scale

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This paper presents an account of the development, reliability, and validity of the Tehran Multidimensional Perfectionism Scale. Five hundred students from the University of Tehran (300 females, 200 males) were included in this study. All participants were asked to complete Tehran Multidimensional Perfectionism Scale (TMPS), the Inventory of Interpersonal Problems (IIP), the Mental Health Inventory (MHI), and Neuroticism and Extraversion subscales of the NEOPI-R. Test-retest reliability and internal consistency of the IIP were evidenced at satisfactory levels. Concurrent validity of the TMPS was calculated according to correlation coefficients between the scores on the TMPS and scores of the IIP, MHI, and NEOPI-R. All correlations were statistically significant. It was concluded that the TMPS is a reliable and valid scale to measure multidimensional perfectionism in Iranian populations.

Keywords: *Tehran Multidimensional Perfectionism Scale, validity, reliability, Iran*

Development of a safety culture assessment tool (SCAT) in a Japanese company

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Importance is being increasingly given to building a safety culture against a background of increasing numbers of serious industrial accidents in Japan. The purpose of this study is to develop and demonstrate a concrete way of building a safety culture in an organization. In this study, the constructs of a safety culture were first defined based on existing knowledge. An attempt was then made to develop a Safety Culture Assessment Tool (SCAT) with two dimensional criteria, a three-layered cross-assessment between 'administrator', 'manager' and 'operator', and a sharedness assessment between the three layers, set against ten areas such as 'Safety Statement', 'Safety and Productivity' and 'Rules and Documentation'. The SCAT was tested in 38 companies. After extracting a set of data necessary for standardization, a comparison was made before and after the installation of the safety culture education program in one company. In the safety culture education program PDCA cycle we are offering, the planning of a measure is conducted after the extraction of data and explaining the risks for employees. Additionally, not only the administrator and the managers but also the operator who is to execute the measure participate in the planning stage and suggest a feasible plan for execution on the actual site. The cycle also requires clearly planned 4W1H – When, Where, Who, What and How – on all participants. Further to the above, a process to confirm smooth execution without any new problems occurring, was run three times, establishing the 'Check' and 'Action' phases. As a result, an improvement was confirmed after the installation of the program. The validity of the safety culture education PDCA program was

confirmed by the study. It is expected to be applied in an increased number of companies in order to further establish the program.

Keywords: *safety, industrial accidents, safety culture assessment tool, organisation, Japan*

Development of reaction-evaluation measures of training programs: A reinterpretation of Kirkpatrick's model

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In borrowing concepts from Kirkpatrick's (1959/1960, 1994) 4-level model (reaction, learning, behavior, and result) to evaluate human resource development training programs, previous research resulted in the development of many measures. However, those measures faced limitations as different levels were assessed either at individual or organizational levels, creating unit of analysis issues, and also, the operationalization of behavior/result levels were problematic. To overcome the limitations, we reinterpreted Kirkpatrick's 4-level model (1959/1960, 1994) and developed new measures of learning, behavior, and result levels as well as including a measure of the reaction level (Warr, Allan, & Birdi, 1999) to evaluate training programs. These measures, comprising of reaction (emotional reaction, perceived usefulness, perceived difficulty), learning (objective evaluation), behavior (transfer motivation, possibility of transfer), and result (expectation of results) were used to examine a 7-factor model proposed in this study. Two samples were investigated in the study to examine the psychometric qualities of the measures (e.g., reliability and validity). The first sample ($N=256$) was drawn from an action learning training program that lasted for three days, and the second sample ($N=148$) was from a leadership training program that lasted for three days. For both samples, the measures were administered at the end of each training program. Measures of self-efficacy, locus of control, and openness to experience were additionally administered only for the second sample prior to the leadership training program to examine convergent validity of the measures. While the training context of the two samples were different, both showed

significant and similar results. Our measures in both samples showed acceptable reliabilities (Cronbach's $\alpha=.56\sim.96$) and replicated a theoretically expected 7-factor model through exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Moreover, our measures were correlated with self-efficacy, locus of control, and openness to experience in the second sample, demonstrating convergent validities of the new measures. In general, evaluating the effectiveness of training programs has been limited with regard to the reaction and learning levels. However, the measures developed in this study can provide multi-faceted evaluation of programs and we hope that such developments will lead to the development of effective training programs.

Keywords: *Kirkpatrick's 4-level model, measurement, training programs, reliability, validity*

Development of the Measure of Absorption in Sport Contexts (MASC)

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Absorption is a positive state of heightened concentration and involvement in the task at hand (Roche & McConkey, 1990). The development of a measure of absorption in sport is important for examining the connection to other sport-related constructs, such as imagery and flow. Tellegen and Atkinson (1974) developed and validated the Tellegen Absorption Scale (TAS) as a self-report measure to assess absorption in everyday life. The MASC items were derived from the original TAS and transferred to sport situations, that is, we modified the original items from an everyday context into a sport-specific context. This study aims to examine the psychometric properties of the MASC. The sample in this study consisted of 319 physical education students (mean age 20.7 years; $SD = 3.74$) who were involved in range of individual and team sports. On average, participants had been participating in the various activities for 9.7 years ($SD = 4.83$) on a recreational ($n = 66$), club ($n = 168$), state ($n = 62$), or national ($n = 23$) level. After ethics was approved, participants completed the MASC in

Melbourne, Australia. Cronbach's alpha coefficients showed acceptable scores for most of the MASC subscales. Internal consistency ranged between .71 and .80. Convergent validity was supported with item loadings of .45 and higher for the six factors. Inter-factor correlations ranged between .46 and .85 ($M = .64$). The measurement model showed a significant p value, but acceptable fit values for the Comparative Fit Index (92) and Tucker-Lewis Index (.91), the standardized root-mean-square residuals (.05), and root-mean-square error of approximation (.05). Convergent and construct validity has been found acceptable for all six factors, and the overall measurement model revealed acceptable fit. As a limitation of the study, a homogenous sample was used and the results need to be cross-validated with a second sample. In addition, future studies need to test possible model misspecifications that were evident in the significant p value. External validity of the MASC also should be assessed, examining links with sport constructs that should be theoretically linked to absorption, including imagery, hypnotic susceptibility, and flow.

Keywords: *absorption, flow, sport-related constructs, imagery, hypnotic susceptibility*

Development of the Victimization and Bullying Inventory: A post-school measure

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The aim of this study was to develop a new self-report instrument, the Victimization and Bullying Inventory (VBI), for the measurement of victimization and bullying behaviour in early post-school aged populations. No published measure could be identified that was specifically designed to measure victimization and bullying in this population. The initial pool of 36 behaviours was drawn from school and adult measures with some new items written specifically for the post-school aged population. All behaviours were presented once from the victim perspective and once from the bully perspective. Participants were asked to indicate how frequently they had been bullied/ bullied others by each of the 36 behaviours, in the preceding six months, on a five-point scale

(from 0 = Never to 4 = Almost Always). Data from a sample of over 300 first year psychology students was used to test and refine the psychometric properties of the instrument. Several items were removed from the initial version of the VBI due to floor or ceiling effects. Results indicated that the resulting victimization and bullying scales were reliable, for both males and females. Prevalence data of endorsement of individual items indicated that substantial numbers of individuals had been involved in some form of bullying behaviour, with experience of both bullying and being victimized not uncommon. Principal Components Analysis identified a 3-factor and 4-factor structure as underlying the victimization and bullying scales, respectively. The three victimization factors were characterized as Social (Relational), Physical, and 'Teased and Taken'. The four bullying factors were characterized as Manipulation of Property and Person, Physical Intimidation, Verbal and Social (Relational). A factor structure notably different to that observed in school-aged studies suggests possible maturational differences in social networks and/or support for Bjorkqvist's theory that as individual social skills evolve, so does the nature and sophistication of bullying behaviour. Differences in the factor structures of post-school victimization and bullying may suggest that the population is being victimized by different behaviours to those employed to bully others, possibly due to victimization by non-peers. In sum, the new measure should be a useful instrument for examination of the nature and prevalence of victimization and bullying in early post-school aged populations, an under-researched population, and for the study of the stability of victimization and bullying behaviour beyond the school years.

Keywords: *victimization, bullying, self-report inventory, post-school, Bjorkqvist's theory*

Developmental consultation and educational support for harmful effects by prophylactic BCG vaccination in an infant with profound disabilities

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Approximately 4,000 infants and children have suffered from mental and physical damage due to the harmful effects of a vaccine in Japan, 60 years after World War II. They display many kinds of mental problems and need not only medical treatment but also psychological care. First, we tried to correctly perceive the reality of mental and physical retardation and the recovery processes of the inoculation damage. Second, we carried out new approaches for impaired infants, which we based on developmental consultation and guidance, bringing up interpenetrative relationships between their self-recognition and social communications. We longitudinally observed an infant from 1 year and 11 months of age to investigate the psychological effects of prophylactic inoculation with BCG vaccine and to evaluate properties of our educational methods for mental retardation. Two normal infants were controlled for the equivalent period. We carried out the G-band staining of the chromosome with blood lymphocytes. Head MRI and EEG were repeatedly recorded for physiological and psychological assessment. Moreover, we observed behavioural features in daily life and evaluated the developmental properties with the Kyoto Scale of Psychological Development. The infant's chromosomal karyotype was 46XX/47XX, ti(12+) due to Paillister-Killian syndrome. She had mental and motor retardation, and magnetic resonance studies of the whole brain revealed an atrophic cerebrum, aplasia of the brain stem, and expansion of the lateral ventricle. After BCG inoculation at the age of 5 months she experienced hyperthermia and ictus epilepticus. Furthermore, she showed more severe mental retardation, deafness, and amblyopia after epilepsy. However, she did gradually recover perceptual and verbal functions with support of her development of self recognition and expression. These results indicate that the BCG vaccination may have more harmful effects in infants and children when they have a high rate of chromosomal mutation and an anamnesis of

epilepsy. The results also suggest that the infant has potential abilities of recovery despite severe disorders and could educate her development by these approaches.

Keywords: *prophylactic BCG vaccination, harmful effects, disability, infants, educational support*

Diagnostic evaluation of a suicide prevention program among Mexican adolescents

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To assess the effects of a program of life skills and competencies for life (WHO/PAHO) in three groups of adolescents who received training workshops to prevent suicidal behavior. A quasi experimental field study was conducted, involving three groups of students chosen randomly from the first grade of a public secondary school in the State of Yucatán, Mexico. Each group filled out a pretest, implemented a workshop to develop one of the three life skills selected (coping with emotions, assertive communication and conflict management), and finally filled out a post test. The duration of each workshop was 20 hours. The results obtained by test Student T showed statistically significant differences. Regarding assertiveness, assertive behaviors and acceptance of this style of communication increased; also noted is the increase in positive styles to address conflict. Regarding coping with emotions, self-knowledge of emotional responses increased, as did the awareness of the effect of the emotions in the body, and also, ways to react using breathing and healthy cognitions. In general, the study underpins the importance of promoting among the adolescent population life skills and competencies for life in accordance with the WHO/PAHO proposal (1993; 2001; 2003) to strengthen the protective factors in this stage of life and prevent the occurrence of risk factors as suicidal behavior.

Keywords: *life skills, adolescents, suicide prevention program, Mexico, coping*

Diagnostic test validation with mixed groups

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The standard method to validate diagnostic tests requires the construction of two pure groups: participants with the condition of interest, and participants without the condition of interest. The aim is to evaluate the tenability of diagnostic test validation with mixed groups: groups which include both participants with and without the condition. Special emphasis is given to the statistical model "mixed group validation" (MGV) proposed by Dawes & Meehl (1966). MGV was comprehensively described using standard statistical theory to specify the standard error and the effect of assumption violation. MGV's effectiveness in recovering true validity coefficients in real data was tested by reinterpreting published validation studies as mixed group designs. The assumptions of MGV were considered in greater detail in qualitative and quantitative analyses. MGV effectiveness was tested again in conditions specifically chosen to satisfy the assumptions of MGV. Finally, the mathematical structure of MGV was compared to other models to look for similarities and to find other models suitable for diagnostic test validation with mixed groups. The standard error and effect of assumption violation of MGV was specified. MGV failed to recover the true validity coefficients in real data without bias. The assumptions of MGV were found to be strong, not satisfied in published MGV studies, and that MGV is not robust to assumption violation. It was found that MGV assumptions can be practically satisfied, but only for special cases. In the test of MGV with specially chosen conditions, MGV performed well. MGV was shown to be related to latent class models and mathematically identical to ecological regression. Other models that can be co-opted for diagnostic test validation with mixed groups are reviewed. All these models also have strong assumptions that can only be satisfied in special cases. Diagnostic test validation with mixed groups is tenable but all models involve strong assumptions. No model reviewed is robust to

assumption violation, so the assumptions require justification before the results can be meaningfully interpreted.

Keywords: *diagnostic tests, diagnostic test validation, mixed group validation, standard error, assumption violation*

Differences in driving behaviours between elderly drivers and middle-aged drivers at intersections

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Previous research had shown that elderly drivers rate their own driving behaviours higher than their actual behaviours. The objective of the present study was to compare driving behaviours of elderly and middle-aged drivers at intersections where many accidents are caused by elderly drivers. Questionnaire surveys and field experiments were conducted for 20 elderly drivers ($M = 68.35$, $SD = 4.02$) and 20 middle-aged drivers ($M = 40.60$, $SD = 8.80$). All participants answered questionnaires about self-reported driving behaviours, and then their actual driving behaviours were measured on a course in a residential area. Two cars with video cameras, drive recorders and wireless 3D-gyro sensors attached to the drivers were used for the field experiments. Driving performance was measured for turning right at non-signalled intersections and going straight at intersections with stop signs. As behavioural measures, driving speeds, speed changes during acceleration and deceleration and visual search behaviour for right and left directions were used. First, no significant difference was observed between the self-reported driving behaviours of elderly and middle-aged drivers. Second, elderly drivers drove at lower speeds before the non-signalled intersections than middle-aged drivers; however, at the lowest speed, at 30 metres before intersections and just on the intersections, no significant difference was observed. When turning right, elderly drivers performed better with respect to visual searching angle, timing and frequency for right direction, whereas they performed poorly with respect to the visual searching time for left

direction. At intersections with a stop sign, elderly drivers reduced their speed more near the intersections than middle-aged drivers. Although there was no difference in driver speeds before the intersections, the lowest speed of the elderly drivers on the intersections was significantly higher than that of the middle-aged drivers. Finally, some relationships between the self-reported driving behaviours and actual driving performances were found. Elderly drivers tended to search their own driving lanes sufficiently but opposite ones insufficiently, which can contribute to accident risk at non-signalled intersections. Furthermore, it was also noted that they could not sufficiently reduce their speed on intersections with a stop signal, creating higher risk of accidents.

Keywords: *driving behaviour, elderly drivers, middle-aged drivers, intersections, accidents*

Differences in risk perception among nurses based on experience

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We examined whether nurses who had worked for less than a year, two to five years, and over 15 years differ in (A) risk evaluation, (B) hazard perception (C) choice of avoiding hazards in nursing. Forty-nine nurses participated in this study. All of them were Japanese. They were divided into three groups based on length of time working as a nurse: the one-year group ($N = 23$), the two-to-five-year group ($N = 12$), and the over 15-year group ($N = 14$). A picture of nursing activity was displayed for 25 sec. After the picture disappeared, participants answered three questions with a questionnaire. The first question related to (A) risk evaluation. Participants evaluated how risky the picture was (extremely risky (5), not at all risky (1)). The second question related to (B) hazard perception. One picture had three hazards; three hazards and one dummy were listed in the questionnaire. Participants responded with "I found one" or "I didn't find one." The third question related to (C) choice of avoiding hazards. There were three choices: behave safely to avoid hazards (3), keep things as they are, or take more risk (1). There were 16 scenes. We conducted this study in a group. One-way

analysis of variance (ANOVA) was performed to check experience differences separately. No experience differences were found in A or B (raw score, d' , β) scores. C scores were in the following order: the two-to-five-year group was less than the 15-year group which was less than the one-year group. A high score means more safety. Multiple comparisons confirmed a significant difference between the two-to-five-year group and the one-year group ($p < .05$). The lack of significant differences in A scores and B scores, d' and β suggested that experience made no difference to risk evaluation and hazard perception. A significant difference in C suggested that the two-to-five-year group's choice of avoiding hazards was more risky. This result is consistent with a previous study (Usui, Wada, Aoki, Tachikake, 2005) that suggested that nurses with two to five years of experience had lower safety awareness.

Keywords: *risk evaluation, hazard perception, nursing, experience*

Differential effects of chronic paroxetine in adult and adolescent rats: A behavioural, neurochemical and proteomic analysis

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Use of selective serotonin reuptake inhibitors (SSRIs) in adolescent depression has recently been scrutinised following reports of minimal efficacy and increased risk of suicidal ideation/behaviour associated with children and teenagers given these drugs. This study examined the behavioural and neurochemical effects of chronic paroxetine treatment in adult and adolescent rats in order to identify differential brain changes potentially underlying these age-specific effects. Adolescent and adult male Wistar rats were treated with paroxetine in their drinking water for 22 days, during which time they were assessed for depression- and anxiety-like behaviours on the emergence test, elevated plus maze, social interaction test, novelty-induced hypophagia test and forced

swim test. Subsequent *ex vivo* analyses investigated changes in the serotonin (5-HT) and dopamine systems using high-performance liquid chromatography (HPLC) and quantitative autoradiography. Serum paroxetine concentrations were also assessed using HPLC and changes in hippocampal protein expression determined using two-dimensional gel electrophoresis. Despite clear efficacy in adult rats, paroxetine failed to show an antidepressant effect in adolescent rats in the forced swim test. Adolescents also displayed more pronounced anxiogenic responses to paroxetine than adults in a variety of tests. These behavioural differences were reflected in differential 5-HT, dopamine and proteomic changes in the brain. Adult paroxetine-treated rats displayed decreased 5-HIAA, and increased dopamine turnover, but no change in dopamine, DOPAC or 5-HT in the striatum, or serotonin transporter (SERT) binding in the ventral tegmental area. In contrast, adolescent rats displayed decreased 5-HIAA and HVA concentrations, and increased SERT binding. Paroxetine differentially altered hippocampal protein expression in adolescent rats, particularly in a number of proteins involved in neurotransmitter synthesis, vesicular trafficking and intracellular signaling. Despite the greater adverse impact of paroxetine on the adolescent brain and behaviour, adult rats displayed higher plasma concentrations of paroxetine than adolescents. The immature brain appears to respond paradoxically to paroxetine, producing anxiogenic and anhedonic effects in adolescents. Drug-induced upregulation of SERT binding density may underlie these behavioural changes as well as idiosyncratic effects of paroxetine on intracellular signaling proteins and neurotransmitter synthesis. Therefore, the current caution in the use of paroxetine in young people is clearly warranted.

Keywords: *paroxetine, chronic paroxetine treatment, adolescent depression, selective serotonin reuptake inhibitors (SSRIs), rats*

Differential effects of intrinsic motivation and identified motivation on learning in Japanese junior high school students

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The purpose of this study is to explain intrinsic motivation and identified motivation on academic performance of Japanese junior high school students. Specifically, we investigated the difference between these effects by meta-cognitive strategy which regulated self-academic work. Intrinsic motivation is the most autonomous motivation and exists when people freely choose to perform an activity out of a sense of interest. In contrast, the identified motivation involves an individual's recognition and acceptance of the value. Although intrinsic motivation and identified motivation are strongly correlated, these constructs are theoretically distinct. Despite this fact, little research has examined differential effects of these motivations on learning. We conducted the same research two times, and the second one was done one year after the first one. A total of one hundred seventy three participants completed two sets of questionnaires both times. The first set was the Autonomic Motivation Scale for Japanese Junior High School Students which was based on Ryan and Connell's Self-Regulation Scale for academic use. The other set was the Meta-Cognitive Strategy Scale. Both scales were rated on a 4-point Likert scale 1(= not at all) to 4(= completely). We also added an academic performance scale the second time. Internal consistency of intrinsic motivation, identified motivation, meta-cognitive strategy has ranged from $\alpha = .92 \sim .85$. By covariance structure analysis, the intrinsic motivation was revealed to be independent of academic performance, in addition, the identified motivation dependent on it through meta-cognitive strategy. Concerning Fit indices, GFI=.99, AGFI=.94, RMSEA=.04, suggested that the model fits the data quite well. Our results indicate that intrinsic motivation and identified motivation show statistically-differential effects on the academic performance and the meta-cognitive strategy of Japanese junior high school students. Furthermore, the identified motivation is a significant factor in academic performance.

Keywords: *motivation, academic performance, meta-cognition, high school students, Japan*

Discrimination of deceptive and truthful responses using the alpha event-related desynchronization

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Lying is a more cognitively complex task than telling the truth. Lying requires the retrieval of information from memory, response inhibition, and conflict monitoring. To directly measure cognitive load, many brain signal methods have been used, and among them, event-related desynchronization (ERD) of brain waves has proven to be a useful tool in measuring cortical activation levels during a wide range of cognitive tasks. Electroencephalogram (EEG) alpha power desynchronizes when individuals are mentally active, and reflects increasing task demands. When lying, relatively more cognitive complexity is experienced, and this phenomenon should be reflected as alpha band ERD. In this context, our study assumed that increased cognitive effort during deception will generate increased ERD. This aim of this study is to attempt to show that ERD can be used as an effective detection measure of deception. Participants completed a manipulation scale questionnaire and the Implicit Association Test (IAT). After a baseline EEG measurement, they performed the "Jack's beanstalk" task. We developed a program where a dice was rolled and Jack climbs up the number of steps rolled on the dice. Participants had to decide whether to enter the presented number (truthful response) or a different number (deceptive response). The computer played the role of a second player, but the participants believed it was a real person. The goal of the task was to reach the top of the beanstalk. Telling the truth involved a small reward but no risk, whereas lying increased the possibility of reaching the top of the beanstalk but involved monetary risk. EEG and skin conductance data was acquired using a Laxtha Poly-G-I monitoring device. Data analysis is currently in progress, however, we predict that deceptive responses will represent more alpha band ERD than truth telling so that ERD will be able to discriminate deceptive responses from truthful response. These results would suggest that alpha band ERD could detect deceptive responses. Thus, ERD may be a valuable tool in measuring deception. Finally, this study may provide an opportunity to

complement the limitation of other measurements of deception detection, such as the standard polygraph.

Keywords: *lying, event-related desynchronization*

Dispute resolution and psychology

ENGLAND, M.

The aim of this study is to encourage an appreciation of psychological aspects of dispute resolution theory and practice by outlining and explaining some psychological and multi-disciplinary aspects of dispute resolution theory and practice. Participants are to have an appreciation that there are definable psychological aspects of dispute resolution theory and practice. Participants will also appreciate the potential for the application of this knowledge and for further research in the area. There is considerable scope and corresponding opportunity for the application and research of psychological aspects of dispute resolution.

Keywords: *dispute resolution, theory and practice, application and research*

Do features of stimulus influence effects of idealized media portrayals on implicit self-image?

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The primary purpose of this study was to employ measures of implicit body image based on pictures and words versions in an effort to more completely explore the consequences of exposure to ideals of beauty on beliefs about the self among Chinese young women. One hundred and twelve female Wuhan Institute of Physical Education undergraduates, who are majoring in sport psychology, sport mass media and kinesiology, between the ages of 18 and 22, participated in exchange for partial fulfillment of a course requirement. Participants were presented via computer with a series of 20 magazine advertisements obtained from popular magazines. Fifty six of all participants saw 20

nonperson/nonbeauty product advertisements (for example, sporting car) in the control condition. Alternatively, advertisements contained unrealistic standards of female beauty in the experimental group. After exposure to the advertisement, participants were assessed on implicit self evaluation about their body by pictures or words irrespectively. The design of this assessment was a 2(Condition: Beauty vs. Control condition) × 2 (Attribute Target: Picture stimulus vs. Word stimulus) within-participant design. The difference in Implicit Association Task (IAT) effects between the picture and word IAT versions was revealed in a significant main effect of attribute target factor, $F(1,108) = 44.901, p = .000$, partial $\eta^2 = .65$. However, there was not a significant main effect of condition factor, $F(1,108) = 2.651, p = .106$. Additionally, the interaction effect of two factors was not significant, $F(1,108) = 0.624, p = .431$. Even the results showed that participants were more susceptible to IAT effect with picture stimulus than words stimulus affected by media portrayals; people may be able to adjust, correct, and protect their self-evaluations on an implicit level, which was supported by previous research on explicit self-report measures of body image. We discussed the reasons why the result by the measures of implicit self image evaluation was not dissociated with that by the measures of explicit level.

Keywords: *implicit body image, beauty ideals, self evaluation, implicit association test, explicit self-report*

Do socially anxious people have utterance difficulty? An examination of Eysenck's working memory theory in social anxiety

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It is well known that socially anxious people have difficulty in making speeches in other persons' presence, or on the phone, and so on. The performance deterioration like this can be caused by anxiety, and Eysenck (1998) points out the possibility that anxiety could impair the function of working memory in a high anxiety group (e.g., anxiety disorders). The aim of this

study was to determine whether the function of working memory in socially anxious people could be impaired in utterance situations, compared to non-socially anxious people. Forty-five undergraduate students took part in the study. About a month before starting the experiment, 277 undergraduate students underwent the screening test. To determine the high and low social anxiety group, the Fear of Negative Evaluation scale (FNE; Watson & Friend, 1969) was used. Twenty-four participants who scored more than 1 SD above the mean made up the high social anxiety group, and 21 who scored more than 1 SD under the mean made up the low social anxiety group. The Reading Span Test (Daneman & Carpenter, 1980) was used to examine the function of working memory in high and low social anxiety group. In the experimental session, participants first underwent FNE to ensure the validity of high and low social anxiety group. Then the Reading Span Test (RST) was performed. In this study, participants were required to perform RST twice, one was the paper-and-pencil test, and the other was responded verbally (utterance test). The order of the two tests was randomized for each participant. A two way ANOVA (social anxiety × way of answering) revealed that the interaction effect was significant. As a result of multiple comparison analysis, the performance on the utterance test was significantly worse than the paper-and-pencil test in high social anxiety group. But such a difference was not observed in the low social anxiety group. Also, no difference was observed on the performance on the paper-and-pencil test between two groups. These results lend support for Eysenck's theory of social anxiety under certain situations. Most importantly, the performance deterioration of working memory occurred selectively in the utterance situation in the high social anxiety group, but not in the paper-and-pencil situation. This suggests the possibility that the speech difficulty in socially anxious people could be caused by an impaired working memory system.

Keywords: *working memory, anxiety, reading span test, Fear of Negative Evaluation Scale, speech*

Do the media contribute to whether or not British teenagers feel confident?

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This study set out to explore whether there is a relationship between media exposure and self-esteem in United Kingdom adolescents. One hundred and nine participants aged 13 to 14 provided information on their levels of use of television, the Internet, magazines, and movies. They also completed a Rosenberg self-esteem scale (Rosenberg, 1989), providing measures of global as well as positive and negative self-esteem (Owens, 1994). A significant positive correlation between boys' Internet use and their global self-esteem was found ($r = .283$, $n = 52$, $p < 0.05$, two-tailed) and between Internet use and positive self-esteem ($r = .428$, $n = 52$, $p < 0.05$, two-tailed). Results indicate that the Internet can aid self-esteem in adolescent boys.

Keywords: *media exposure, self-esteem, adolescents, Rosenberg self-esteem scale, global self-esteem*

Does leadership matter? Performance implications of arbitrarily assigning team leaders

RADFORD, K.

Teams are widely regarded as essential to efficient project work structures. How teams are led and managed can have a substantial impact on performance and outcomes. Using leader-categorization theory as a conceptual basis, this study aimed to investigate the influence of an arbitrarily assigned leader on team performance in a controlled setting. The influence of gender, task difficulty, and task satisfaction were also investigated. Sixty undergraduate psychology students served as participants. The experimental task, which was completed in a room with no other teams or people (other than the researcher) present, involved re-ordering lyrics of nine current and past "Top 40" songs that were differentiated by difficulty level. Team members were asked to order the lyrics provided on an A4 sheet of paper with their correct line number. Of the 20 3-person teams, ten were arbitrarily assigned a leader, while ten acted autonomously. Performance outcomes were accuracy and speed of task completion.

After participating in the study, participants completed a satisfaction questionnaire. Results revealed that assigned leader teams had better overall performance outcomes than autonomous teams did. Specifically, led teams had more accurate results than autonomous teams did. As task difficulty increased, there was a decline in the performance of both team types. However, there were no significant differences in time taken to complete each activity, task satisfaction or gender distribution. The study found support for leader categorization theory, suggesting that arbitrarily assigning leaders in teams induces role expectations that impact overall team performance. The study has potential implications for assigning team roles within organisations to influence team performance. Specifically, this research provided support for assigning team leaders to work projects in order to increase overall team performance.

Keywords: *leader categorization theory, role expectation, team performance, task difficulty*

Does the pattern for autobiographical memory and arousal vary among breast cancer patients with and without PTSD?

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This study examined how breast cancer patients diagnosed with and without post traumatic stress disorder (PTSD) varied in memory patterns and arousal. A mixed method study was chosen to address the research objective. Thirty breast cancer (Stage I-III) patients were chosen for the study who completed the screening tool Detailed Assessment of Posttraumatic Stress (DAPS; Briere, 2001) and Autobiographical Memory Test (AMT; Williams and Broadbent, 1986). Their arousal level was assessed before and after the retrieval of memories in response to cue words. Among the thirty patients, five demonstrated PTSD symptoms and the other 25 did not fulfill the PTSD criteria. PTSD group recalled more over-general memories on the AMT while the non-PTSD group recalled more specific memories. In addition, PTSD as compared to non-PTSD women displayed higher levels of arousal. The narratives of the life experiences as revealed in the word cueing test

surfaced prominent themes across the responses. Themes that emerged were beliefs, health, work, society and social relationships. This study suggests that a life threatening illness like breast cancer can precipitate PTSD symptoms and result in changes in cognitive and physiological domains. Thus, research is needed to examine the effects of PTSD symptoms on immune responses, cancer outcome, and adherence to medical regimens.

Keywords: *post-traumatic stress disorder, cancer patients, memory patterns, arousal, autobiographical memory*

Dominant hemisphere of typical developed and autistic children between Picture-Based Personality Tests: A near-infrared spectroscopy study

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Children with Autistic Spectrum Disorder (ASD) have the abnormality of their central nerve system and this causes their unique cognitive functions. Personality tests have been used clinically for a long time to identify various characteristics from a person's responses. However, it is not yet known how the assessment stimuli are processed in the brain. Therefore, we compared with their dominant hemisphere of typical developed children (TD) and ASD between picture-based personality tests. 17 TD (male 14; female 3) and six male ASD junior high school students were participated. Written informed consent was obtained from all participants and their guardians. Four Rorschach pictures, two TAT pictures and three PF-study cartoons with half the dialogue written in Japanese and the other half left blank were used. In all three test conditions, a common stimuli presentation procedure was used: a black cross was presented 30 seconds before and after a stimulus plate was presented for 40 seconds through a 19-inch wide liquid crystal display. The

participant was asked to answer in a whispering tone as part of each set of standard verbal instructions. During the testing Oxyhemoglobin (Oxy-Hb) changes in the participant's forehead were recorded by Near Infra-Red Spectroscopy (HITACHI Medical CO., Ltd., JAPAN). Oxy-Hb volumes were averaged in each hemisphere and calculated the Laterality Index (LI). LI shows which cerebral hemisphere is activated or not as the range from 1 to -1. In TD, there was a significant difference in the tests ($p < 0.05$), and there is a significant difference between Rorschach and PF-study ($p < 0.05$). In ASD, there is no significant difference in all factors. When compared with TD and ASD, there is a significant difference between LI of PF-study ($p < 0.001$). The significant difference between dominant hemispheres of TD (left) and ASD (right) during the PF-study suggested that ASD lack the social brain system (Brothers, 1990; Castelli et al., 2002) that is related to a neural circuit comprising the amygdala, superior temporal sulcus, and prefrontal cortex in the left hemisphere.

Keywords: *children, Autism Spectrum Disorder, dominant hemisphere, personality tests, central nervous system*

Don't forget father

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The aims of this study were to test Bögels' and Phares' (2008) model of anxiety acquisition in children by investigating whether differences in children's anxiety exist when their parents exhibit high levels of self-reported anxiety compared to children whose parents exhibits low levels of self-reported anxiety. It also investigated whether mothers and fathers differentially predict sons' and daughters' anxiety. Ninety one families with children between the ages of 8 and 12 years participated in the study. Children's biological parents completed measures of anxiety and parental support effectiveness. Children completed measures of anxiety and parental support satisfaction. This study revealed that mothers and fathers high in trait anxiety had children higher in anxiety than did mothers and fathers

low in trait anxiety. The results also showed that both mothers' and fathers' anxiety significantly and differentially predicted sons' and daughters' anxiety. Specifically, observable anxiety (state anxiety) modelled by mothers had a significant impact on daughters' endogenous anxiety (trait anxiety), while the observable anxiety modelled by fathers had a significant impact on sons' endogenous anxiety. Moreover, fathers' informational support satisfaction significantly predicted daughters' trait anxiety; however, fathers' perception of their informational support provisions significantly predicted sons' state anxiety. The findings of this study give further support to Bögels' and Phares' model with regard to the differential contribution mothers and fathers make in predicting non-clinical symptoms of anxiety in children. The outcome of this study shows that the opposite-sex parent may have a greater impact on children's anxiety than first thought. Therefore, the information fathers convey to their children and the way in which that information is given may be an important part of fathers' role as encouragers of appropriate risk taking behaviours in their children and promoters of the world outside the home. This study clearly shows that the role of fathers should not be overlooked in investigations of children's anxiety.

Keywords: *anxiety, children, parents, anxiety acquisition, trait anxiety*

Effect of influence effectiveness by hierarchical level in the use of interpersonal influence

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This study explored the effectiveness of influence tactics by hierarchical level in the organizational environment. The sample consisted of 47 superiors, 125 peers and 102 subordinates. A model of Univariate Analysis of Variance (ANOVA) with Repeated Measures was used. Rational persuasion ($\beta=0.205$) was the only tactic responsible for the effectiveness of the influence ($p < 0.01$) when used in upward influence attempts. Consultation had positive effects on the effectiveness of the influence

among peers ($\beta=0.096$) and subordinates ($\beta=0.06$), probably because it allows greater involvement of the target in the task proposed by the agent, not to mention that is more socially accepted to obtain cooperation. Exchange (subordinates $\beta=-0.125$) and coalition tactics (peers $\beta=-0.08$; subordinates $\beta=-0.095$) had negative effects on the effectiveness of the influence in lateral and downward influence attempts. At least among peers, legitimating tactics ($\beta=0.115$) showed positive effects on the effectiveness of the influence. This is maybe due to the respect and recognition of norms and organizational policies. To conclude, to influence superiors the use of reason or argumentation seems to be the most common accepted behavior because it shows intellectual ability and negotiating skills of the agent. Rational persuasion contributed positively to the effectiveness of the influence, except over subordinates. In general, respondents preferred using soft tactics (rational persuasion, consultation) and disliked using hard tactics (exchange and coalition tactics).

Keywords: *influence tactics, organisation, superiors, peers, subordinates*

Effect of objective housing characteristics on well-being: A conditional growth model

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Relatively few studies have examined how internal and external determinants contribute to well-being, using domain-specific indicators of well-being. To cite an example, the authors' prior study examined top-down and bottom-up effects on housing satisfaction. The study revealed that stability in housing satisfaction before and after moving should be explained by top-down effects of life-satisfaction on housing satisfaction. However, the stability of individual differences was relatively low. This finding suggests that objective housing characteristics have strong bottom-up effects on housing satisfaction. The aim of this study is to test this prediction. The analysis is based on the German Socio Economic Panel survey. We used data concerning participants who moved into a new

house only once in the years from 1991 to 2007 ($N = 3658$). Participants' annual reports of housing satisfaction were used as outcome variables. For the analysis, a conditional two intercepts and two slopes growth model was used. The analysis was limited to eleven years from five years before moving to five years after moving (intercept before moving = five years before moving; intercept after moving = five years after moving). Variables regarding housing characteristics after moving were entered as predictors of intercept after moving. The model fit indexes showed good fit, $\chi^2(94, N = 3658) = 144.99, p < .001$; CFI = .992; RMSEA = .012; SRMR = .020. Housing characteristics significantly predicted the intercept after moving of housing satisfaction. Housing size (unconditional $\gamma = .003, 99\%CI = .00|.005$), heating ($\gamma = .80, 99\%CI = .23|.138$), ownership ($\gamma = .75, 99\%CI = .50|.99$), and condition ($\gamma = .69, 99\%CI = .41|.97$) positively influenced the intercept after moving. In contrast, house type variables negatively influenced it in comparison with family house (row house: $\gamma = -.10, n.s.$; low-rise: $\gamma = -.29, 95\%CI = -.52|-.05$; high-rise: $\gamma = -.48, 99\%CI = -.85|-.10$). The result showed that housing characteristics had long-term effects of moving on housing satisfaction. Specifically, heating, ownership, and condition positively predicted the intercept after moving. In contrast, high-rise negatively predicted it. Future studies should also consider moderator effects on housing satisfaction (e.g., personality traits; residential area).

Keywords: *satisfaction, German, growth model, housing, well-being*

Effect of quality of relationship in the use of interpersonal influence in upward influence attempts

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The present research investigates the quality of relationship in the use of interpersonal influence in upward influence attempts. The sample was composed of 47 leaders. A model of Univariate Analysis of Variance (ANOVA) with Repeated Measures was used. The results showed what key influence tactics built more effective

relationships in upward influence attempts. In general, the quality of relationship was positively affected by the use of consultation and personal appeals ($\beta=0.116$ and $\beta=0.129$) in work-related influence attempts. Collaboration had negative effect ($\beta=-0.104$). Rational persuasion ($\beta=0.200$) and legitimating tactics ($\beta=0.115$) had positive effects upon the quality of relationship when used by female leaders. Inspirational appeals ($\beta=0.069$) and coalition tactics ($\beta=0.082$) had positive effects upon the quality of relationship when used by male leaders. A significant effect of gender upon the use of tactics by the agent was observed, showing better interactions with the opposite sex. When the leader was male, his relationship was better with a woman; when the leader was female, her relationship was better with a man. These findings have important implications for how organizations can understand leaders' use of influence tactics and the effects of these tactics upon the quality of relationship within the workplace, since influence has been considered an essential variable in the executives' performance.

Keywords: *interpersonal factors, upward influence, leadership*

Effect of repeated forensic interviews

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Repeating interviews can lead to new information, but several studies have shown that people are then also more susceptible to creating false memories, especially when children are interviewed (Ackil & Zaragoza, 1998). It is therefore recommended by the forensic interview guideline that an interview should be conducted only once. On the other hand, Hershkowitz and Terner (2007) have shown that if one uses non-suggestive questions, repeated interviews are not harmful. In this study, we conducted interviews based on the forensic interview guideline twice to investigate its effect on the recall of new information and the creation of false memories with college students. Fifteen college students participated in a study in which they thought they had to perform two coloring tasks. Between the two tasks, they were instructed to take a break and

watch a DVD. It contained a short story about a girl that goes to read a book in the park near some children who play on a swing. After subjects completed the second coloring task, they were interviewed about the unintentionally learned events. The first interview was conducted five minutes after the subjects had watched the story, whereas the second interview was conducted one week later. The interviews proceeded through the three stages prescribed by the guidelines: rapport, narrative and question phase. The content of the DVD was divided into 190 items. On average 43.3 items were correctly recalled at both sessions. Participants often referred to information during the first interview, which they did not name during the second interview ($M = 6.1$). They also frequently recalled new information, which were correct items in the second session that had not been mentioned before ($M = 6.8$). Participants recalled very little incorrect information. On average 1.5 incorrect items were recalled at both sessions. A few incorrect items ($M = 0.5$) were mentioned during the first interview, but not at the second. Participants recalled few pieces of incorrect information ($M = 0.6$) in the second session, which they had not recalled before. Participants recalled relatively few correct items, but their number increased when the interviews were repeated. On average seven pieces of new information were correctly recalled at the second session, which had not been mentioned before. The number of incorrect answers was very low in both sessions, which suggests that the production of incorrect information was kept to a minimum due to the forensic interview method. At the second session, hardly any new incorrect information was recalled, suggesting that repeated interviews may not create false information. The results show that repeated interviews draw out more correct information without creating incorrect information. However, the low number of incorrect answers may result from the simple and unambiguous content of the DVD and participants, who were college students and not young children. Furthermore, it is unclear whether the missing items were forgotten or merely not mentioned.

Keywords: *forensic interviews, repeating interviews, false memories, recall, children*

Effect of self-esteem on the preference of the roles in the persuasion game which simulates sales situations: An investigation using the Settoku Nattoku Game (SNG) sales version

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The aim of present study is to investigate the effect of self-esteem on the preference of the roles in the sales situations. For the purpose of this study, we used a negotiation game which simulates the sales situation, named the SNG (Settoku Nattoku Game) sales version (Sugiura et al., 2006). 34 undergraduate students were participated in the game. The method was based on Sugiura et al. (2006). Firstly, participants are divided into two groups and assigned the role of seller (persuader) or buyer (persuadee). Each seller was given 15 minutes to approach any buyers freely to explain his/her new idea of cell phone. When buyers accept the idea from a seller, they were required to sign their name and the final price of that cell phone on a list carried by the seller. Then all participants exchange roles, and the same procedure is repeated. Sellers were requested to raise the total sales amount as much as possible. On the other hand, buyers were requested to buy good cell phones as much as possible within a limited amount of money (150,000YEN). As soon as each negotiation session ended, participants answered some questions about the levels of satisfaction in just before the session. For some scores of satisfaction after each negotiation session, 2 (the level of self-esteem: high vs. low) \times 2 (the role of negotiation: seller or buyer) mixed ANOVAs were carried out. As results, the people with high self-esteem tend to evaluate their behavior positively when they play the role of a seller. On the other hand, the people with low self-esteem tend to evaluate their behavior positively when they play the role of a buyer. Taken together, the level of self-esteem would influence the orientation of the role in the situation of negotiation. In the sales situation, people with high self-esteem would prefer the role of a seller; on the other hand, people with low self-esteem would prefer the role of a buyer. These results are discussed from viewpoints of

the relationship between self and interpersonal behavior in social psychology.

Keywords: *self-esteem, sales situation, satisfaction, negotiation, interpersonal factors*

Effect of social self-regulation and group identification on university adjustment

NAKAGAWA, T. (Miyagi Gakuin Women's University)

Recently, many companies in Japan have come to review whether student candidates have the necessary social and communication skills for doing a job. It should be reasonable that such business relevant skills may develop in the process of university adjustment. Firstly, we focused on group identification (Roccas, et al., 2008) – individuals' degree of identification with the faculty and peers – as a direct factor to enhance their adjustment. Students with high identification are more likely to cooperate with other group members (Simon, et al., 1998) to promote the value of their faculty, which might serve as a source of their social identity. This identification process should be thought of as adjusting students to university. Thus, we predicted that group identification would promote adjustment to university. Secondly, we explored the predictor of group identification and highlighted an individual difference, especially estimating the effect of social self-regulation (SSR; Harada, 2008) on it. People with high self-control appear to effectively handle various situations they encounter. Accordingly, we predicted that SSR would promote group identification. In summary, our research model examines whether group identification may mediate the relationship between SSR and adjustment to university. We conducted a questionnaire survey of 266 respondents from a university in Tokyo and asked them to rate the following scales: (1) ability to regulate self according to the situation (independent variable); (2) identification with the faculty to which they belong (mediator); and (3) fit and grade point average (outcome). Our analysis was divided into measurement and structural models. As a measurement model, we conducted exploratory factor analysis (EFA) for SSR and group identification. EFA revealed three factors for SSR (emotional control, assertiveness

and persistent effort) and two factors for group identification (affective identification and cognitive identification). Next, we performed structural equation modeling to test the validity of our prediction. As predicted, both types of group identification mediated the relationships between SSR, except persistent effort and fit, while only cognitive identification mediated SSR and grade point average. We concluded that SSR should play an important role in predicting university adjustment via group identification.

Keywords: *social self-regulation, group identification, university adjustment, social identity, communication skills*

Effect of stimulating the plantar skin on force discrimination in the ankle joint

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The plantar is the first point of contact between a person and the ground during physical movement. Sensory feedback from the skin is believed to impact the regulation of force in the ankle joints. Force discrimination plays an important role in this process. This study using flat and textured sole plates investigated how different stimulation to the plantar influences force discrimination in the ankle joint. Participants ($n=9$; 4 men, 5 women; average age 25.2 ± 3.4 years; average height 172.5 ± 5.1 cm; average weight 66.7 ± 6.5 kg) were healthy, right foot dominant people. Each participant was tested over a two-day period. One flat (Flt) acrylic board and one textured (Tex) board covered at 2 cm intervals with dome-shaped urethane cushions (8 mm wide, 2.3 mm high) were used as stimuli and presented in random order. Using the double-staircase psychophysical method, force discrimination was measured by asking the participants if the comparison stimulus (Cs) was "heavy or light" compared to the standard stimulus (Ss). The muscle recruitment pattern was isometric plantar flexor muscle contraction. Ss was set to 30% MVC. Cs was changed by units of 200g. The differential-threshold and the standard deviation of the upper and lower differential-thresholds were evaluated. Results of the t-test showed that force discrimination thresholds were

significantly lower in the Tex group compared to the Flt group ($p < 0.05$). There was no significant difference in the standard deviations for the upper and lower limits. Force discrimination threshold was significantly lower in the Tex group. This may be explained by stronger skin sensation from the textured stimulus and by higher spatial resolution of pressure distribution due to the placement of the cushions at 2 cm intervals, the threshold for two-point discrimination. There was no significant difference in the standard deviations of upper and lower discrimination thresholds for either group. These results indicate that differences in skin stimulus do not affect the range of correct responses when measuring force discrimination.

Keywords: *plantar skin, force discrimination, skin stimulus, sensory feedback, muscles*

Effect of text messaging and messaging partner's diversity on attitudes about interactions and adaptation in Japan

FURUTANI, K. (Hijiyama University), HIKITA, A. (Hiroshima University)

The aim of this study was to investigate the effects of text messaging and messaging partner's diversity on attitudes about interactions and adaptation in Japanese students. The participants in this study were elementary, junior high and high school students in Japan ($N = 634$). Their text messaging, diversity of messaging partner (kin and friends), attitudes about interaction (e. g., trust, communication tolerance, text-message dependency, among others) and adaptation (depression and loneliness) were assessed. Among elementary school students, those that were heavy users of text messages and had a high diversity of friends showed more communication tolerance. Those that were light users of text messages and had a diversity of friends were less dependent on text messaging. Those that were heavy users of text messages and had a low diversity of friends had high depression and loneliness. Junior high school students that had a low diversity of kin and a high diversity of friends were highly dependent on text messaging. High school students that were light users of text messages and had a low diversity of friends, or had a high diversity of kin

were less dependent on text messaging. However, text-message dependency was high in those that had a high diversity of friends and a low diversity of kin. Students that were light users of text messages and had a high diversity of kin and friends had a high degree of trust. Conversely, heavy users of text messages had low trust. Students that had a high diversity of kin and friends were less lonely. But, loneliness was high in students with light use of text messaging and a low diversity of friends. These results suggest that the type of school moderated the effect of text messaging and the mail partner's diversity. Use of text messaging in high school students and diversity of friends had a variety of effects.

Keywords: *text messaging, messaging partner diversity, attitudes, Japan*

Effect of the classroom structure on children's multiple motivation in Japanese elementary classrooms

NAKAYA, M. (Osaka University)

Children engage in learning in classrooms where they are influenced by social context (Evertson & Weinstein, 2006). A teacher's classroom management behaviors construct such a context, so these behaviors can influence children's motivation and academic achievements. This study examined the effects of teacher's classroom management behavior on children's academic and social motivation, especially children's goals. Several classroom observations and questionnaires were administered to 100 sixth grade children and their teachers in three elementary classes. The public elementary school was located in the suburbs of the city of Osaka, Japan, which has a population of about 270,000 people. These surveys were administered three times, in July, December and February, 2007. The questionnaires consisted of three parts: 1) Teacher's Behavior Scale (11 items, $\alpha = .78$), Explanation, Positive Expectation, Affiliation, Mutual Respect, Teacher's Motivation; 2) Classroom Structure Scale (8 items, $\alpha = .85$), Norms, Commitment, Comfortableness; and 3) Children's Multiple Goals (12 items, $\alpha = .78$), Compliance Goal, Prosocial Goal, Academic

Mastery Goal, Academic Performance Goal, Assertive Goal. Semi-structured interviews were also conducted in the first and last semester, where teachers were interviewed about the cognition of their classroom. An example question was "Do you think about the interpersonal relationships and classroom atmosphere in the class?" Each teacher's answers were analyzed from a qualitative perspective. Correlational analysis indicated that the relationship between teacher's classroom management behaviors, children's perceptions of the classroom, and children's multiple goals were somewhat different among classes. Teacher's classroom behaviors in the first semester influenced classroom structure and multiple goals at the second and third semester. In class A, the teacher's positive expectation promoted children's mastery goal mediated by classroom commitment. Furthermore, comfort structure mediated effects of the teacher's affiliation behavior on prosocial goals. In contrast, such relationships were not found in class B. Results indicate that teacher behaviors affect classroom structure and children's multiple goals. The importance of social climate in children's learning processes will be discussed.

Keywords: *classroom structure, children, motivation, academic achievement, Japan*

Effects of adult attachment, accident proneness, anxiety on safety awareness: Evidences from Chinese construction workers

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The aim of this research was to investigate the accident proneness, adult attachment, trait and state anxiety on safety awareness of Chinese construction workers. A total of 587 construction workers from two construction companies in Beijing provided data for the study. Accident Proneness Scale for Construction Workers (Li, et al., 2008) was developed and used to measure accident proneness, and a Relationship Questionnaire (RQ, Bartholowew, 1991), State Anxiety Inventory (SAI) and Trait Anxiety Inventory (TAI) Chinese Versions, and Safety Awareness Questionnaire (Choudry,

2007) were used to measure workers' adult attachment, anxieties and safety awareness. The results showed that, compared with insecure workers, secure participants get lower scores on accident proneness, state and trait anxiety, and higher scores on safety awareness. Both SAI and TAI had significant positive correlation with accident proneness, and negative correlation with safety awareness. Path analysis showed that adult attachment influenced accident proneness and safety awareness, while SAI and TAI acted as a medium for the accident proneness to safety awareness. Accident proneness and attachment can influence the safety awareness via the mediating effects of the anxiety.

Keywords: *adult attachment, accident proneness, anxiety, safety, Chinese construction workers*

Effects of background music on comprehension of poems

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Music is popular in our life and used for mood control in music therapy. However, only a few applied studies of music have been done in educational psychology. The purpose of this research was, therefore, to investigate the effects of background music on the comprehension of poems. Three experiments were conducted in this research. In experiment 1, 40 students were asked to rate their own mood on a multiple mood scale before and after listening to a recited positive or negative poem with a positive or negative background music. In experiment 2, 16 students were asked to rate the impression of a recited poem after listening to music, and in experiment 3, 60 students were given a comprehension test of the recited poems. The tested poems were positive and negative verses. Three conditions were employed; congruency condition (positive poem with positive music and negative poem with negative music), incongruity condition (positive poem with negative music and negative poem with positive music), and control condition (positive and negative poems without music). Experiment 1 showed that when students listened to the positive poem with the positive

background music and the negative poem with the negative music, their affectionate mood was rated higher, and their activity mood was rated lower when they listened to the negative poem with the positive background music and the positive poem with the negative background music. These results suggest that the feeling congruency between poem and background music would induce positive mood and that incongruity between them would reduce positive mood. Experiment 2 showed that the positive poem made more strong, bright and peaceful impressions than the negative poem regardless of music types. These results suggest that the music had little influence on the impression of poem. Experiment 3 showed that students in the congruency condition scored higher in the poem comprehension test than those in the incongruity and the control conditions. These results suggested that the incongruity produced some distraction, which led to a low score in poem comprehension. In conclusion, background music facilitates the comprehension of poetry. Congruency of mood, (e.g., positive or negative) between music and poem must be considered as an important condition for poem reading education.

Keywords: *background music, poetry, comprehension*

Effects of incidental emotional states on A-B-C model

HONG, L. (Tsinghua University)

The purpose of this study is to examine the effects of incidental emotional states on A-B-C model. A convenience sampling method was adopted to collect data, and the participants were 500 college students from Beijing (mean age=21.14, *SD* =7.22). The effects of incidental emotional states on A-B-C model were examined by Incidental Affect Scale, Integral Affect Scale, College Stress Scale, and Belief Inventory. Findings indicated that incidental emotional states are not only directly exerted 'C', but moderate the relationship between 'A' and 'C'. The A-B-C model was significantly affected by incidental emotional states.

Keywords: *incidental emotional states, A-B-C model*

Effects of intergroup and intragroup status on ingroup bias

SUGIURA, H. (Hiroshima University), SAKATA, K. (Hiroshima University)

Ingroup bias is the systematic tendency to evaluate one's own membership group (the ingroup) more favorably than a non-membership group (the out-group) (Hewstone, Ruben, & Wills, 2002). Some previous research suggests that ingroup bias is affected by intergroup factors such as intergroup status, intergroup conflict, and the frequency of intergroup contact (e.g. Bettencourt, Dorr, Charlton, & Hume, 2001). However, real social groups are hierarchically structured by not only intergroup status but also intragroup status, and a number of investigators have suggested that intragroup factors also influence group behavior (Branscombe, Spears, Ellemers & Doosje, 2002). We predicted that intragroup status may also be affected by ingroup bias like intergroup status. In the present study, we aim to show an interaction effect between intergroup status and intragroup status that affects ingroup bias. University students ($n=70$) participated in a laboratory experiment. Participants were led to believe that, on the basis of their responses to a test measuring their style of thinking, we could classify them into one of two groups. We manipulated intergroup and intragroup status by the results of a first task which pretended to test perceptual ability and a second task in which subjects were asked to mark a sentence ostensibly written by an ingroup member and another by an outgroup member and to give their impressions of the author. Results show high status intragroup members of a low status group were inclined to feel friendlier toward the authors of the ingroup than the outgroup. In a high status group, low status intragroup members tended to feel friendlier toward the authors of the ingroup over high intra-status members; further, the more they felt they could improve their personal status, the more they would not favor the outgroup author. This interaction effect implies the possibility that intergroup and intragroup status may elicit ingroup favoritism and outgroup derogation. It is worth noting the relevance of present findings to hierarchical structures which are decided by a group and where personal abilities influence

dimensions of group member's impressions. The present findings will enable us to solve phenomena such as education-based discrimination.

Keywords: *ingroup bias, intergroup status, intragroup status, group behaviour, education-based discrimination*

Effects of methadone therapy on changing of positive and negative mood affect in addicts

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The pharmacology of methadone is so straightforward, so unequivocal and so simple for medical professionals. The benefits of such short-term addiction treatment with methadone are substantial. It is a safe, effective, relatively inexpensive medical intervention in solving the problems of addiction. However, some physicians and doctors and even healthcare providers who themselves prescribe methadone to addicts often have inadequate information and are unfamiliar with psychiatric and psychological aspects of how it works. So for better understanding of these aspects the study aimed to investigate effects of Methadone on changing of positive and negative mood affect in addicted. Nineteen addicted people were randomly selected and before methadone therapy with a pretest, Watson's Positive Affect and Negative Affect (PANAS) was administered to them. One month later after methadone therapy again Watson's Positive Affect and Negative affect (PANAS) was administered to them. PANAS assesses: interest, distress, powerfulness, fear, enthusiasm, pride, agitation, nervousness and panic. Data were analyzed with dependent T test. Findings showed significant differences between PANAS components. Methadone therapy increased interest, powerfulness, enthusiasm, proud and decreased distress, panic and agitation in addicted. However there is not any significant difference between nervous components. The findings indicated that using methadone drug in addition to reducing physical symptoms of addiction, can significantly reduce mental problems in addicted people and can be regarded as a proficient drug for treating of addiction and as a results

individuals can have a normal, productive, healthy, socially acceptable and self-fulfilling life style.

Keywords: *Methadone treatment, addiction, positive affect, negative affect, lifestyle*

Effects of parent-child relations and social support on school adjustment of junior high school students

KITAMURA, M. (Gakushuin University)

The purpose of this study was (1) to examine relations among parent-child relationships, social support and school adjustment; (2) to investigate how often junior high school students have feelings of unwillingness to go to school; and (3) to find out what kind of factors induce/reduce those feelings. Junior high school students ($N=104$) completed a questionnaire on parent-child relationships, social support and school adjustment, and answered 3 items on feelings of unwillingness to go to school. Parent-child relationships with love and respect for the child's autonomy had direct effects on having high expectancy for social support and having feelings of school adjustment. Moreover, the expectancy for social support from friends or school teachers also had a positive effect on the feelings of school adjustment. Furthermore, parent-child relationships were categorized into 4 groups: "love/respect the autonomy", "control/doting", "neglect/disinterest" and "rejection/over-possessive". The "love/respect the autonomy" group exhibited higher scores on social support and school adjustment than the "rejection/over-possessive" group. The results about feelings of unwillingness to go to school were as follows: (1) the frequency of feelings of unwillingness to go to school was positively correlated with feelings of school adjustment; (2) "relationships" with friends or school teachers, unspecified feelings of "anxiety/distress", "physical condition" and "school performance" were detected as factors which induce the feeling of unwillingness to go to school; and (3) "ibasho (existential place)" and "self-confidence" factors, which reduce the feeling of unwillingness to go to school, emerged in all groups. This study revealed that parent-child relationships with love and respect for the

child's autonomy and high expectancy for social support had an influence on the feelings of school adjustment. It also determined the factors which induce/reduce the feelings of unwillingness to go to school and investigating those factors more specifically is our future task.

Keywords: *parent-child relationship, social support, school adjustment, junior high, unwillingness to go to school*

Effects of physical attractiveness, gender role conformity, and overqualification in female recruitment in Hong Kong

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The present study investigated the effect of physical attractiveness, gender role conformity, and overqualification in female recruitment in Hong Kong. A total of 101 participants, who were full-time employees in Hong Kong, were asked to rate 8 fictitious job applicants based on their resumes, including 7 items capturing their impression towards the applicants, and 1 item for their decision of whether to invite the applicant to a selection interview. The results indicated that female applicants who were of high physical attractiveness, high gender role conformity, and being overqualified were rated more favorably in the process of personnel selection, and raters' attitude towards homosexuality also had an effect on the process of female recruitment. The findings reflected that there was an interaction effect between physical attractiveness and overqualification, with the effect of physical attractiveness more profound among applicants who were overqualified than applicants who were not. Besides, the results also revealed that raters' attitude towards homosexuality interacted with their ratings for applicants of different levels of gender role conformity. Raters who had a more negative attitude towards homosexuality rated women who did not conform to their gender role expectations less favorably than raters who had a less negative attitude towards homosexuality. The study discusses the implications of the results and ways to reduce the effects of biased ratings in the process of personnel selection.

Keywords: *physical attractiveness, gender roles, overqualification, female recruitment, Hong Kong*

Effects of relational efficacy on secure base and safe haven functions in romantic relationships

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According to attachment theory, a secure base and safe haven are sources that contribute to an individuals' well-being by facilitating one's problem resolution and personal growth (Collins & Feeney, 2000; Feeney, 2004). This study investigated how relational efficacy influences secure base and safe haven functions through the mediation of the supportive interactions in romantic relationships. Relational efficacy, was inspired by collective efficacy (Bandura, 2001), which is a partners' shared belief, refers to a couple's belief that they can mutually coordinate and integrate their resources to prevent and resolve any problems (Asano, 2009). We hypothesized that relational efficacy would facilitate the secure base and safe haven functions, an effect that would be mediated by support provision and reception. Participants were 102 dating heterosexual couples from some Japanese universities. One member of each couple was asked to complete a questionnaire with his or her romantic partner. The average age of the males was 22.32 ($SD = 4.82$) years old and that of the females was 19.97 ($SD = 1.57$) years old. They had been in relationships for an average of 15.99 ($SD = 15.03$) months. Data from individual relationship partners were nested within couples. The intraclass correlation coefficient of all the assessed variables was significant. To account for this nonindependence, we employed multilevel structural equation modeling which allowed us to describe the hierarchical structure of within couples and between couples (i.e., at the individual level and pair level, respectively; Kaplan, 2009). Results suggested that relational efficacy increased both the secure base and safe haven at the pair level. Moreover, this effect was mediated by support provision and reception at the pair level. Our study highlights a shared belief between partners and social support interactions to understand the mechanisms of good functioning in intimate relationships. We

found that romantic couples with strong relational efficacy could take care of each other and consequently have both the secure base and safe haven functions. Future research must use a longitudinal design such as a daily diary to further examine these consequences (Bolger et al. 2003).

Keywords: *romantic relationships, relational efficacy, attachment theory, multilevel structural equation modeling (SEM)*

Effects of sanction on leaders' behaviors in resource dilemmas

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Previous research on Resource dilemmas has shown that leaders are likely to harvest more than followers. However, there are few studies examine effects of a sanction system on leaders' cooperative behaviors in Resource Dilemmas. Therefore, we conducted an experiment to investigate whether and how a sanction system could improve leaders' cooperative behaviors in Resource Dilemmas. Participants were lead to believe that they were going to play a resource game with another five participants. They were assigned to leaders or followers according to their alleged performance in a leadership test. They read an introduction about the game with or without a sanction system, and the specific sanction system was either salient or not salient. Participants were then asked how much they decided to take from the common resource. Results of the experiment showed that participants who were leaders took less from the common resource in salient sanction condition than in not salient sanction condition and no sanction condition. Followers took less in salient sanction condition than in no sanction condition. In salient sanction condition, leaders took less than did followers. Additionally, the results showed that leaders felt less entitled to take more than did followers. These results indicated that a sanction system could improve leaders' cooperative behaviors in the resource dilemma as well as followers, but leaders were more sensitive to sanction and they were more cooperative when sanction information was

salient. However, these effects may be limited to the leaders who were selected by ability because in our experiment leaders were participants who got best scores in the leadership test. As suggested by our results, leaders selected by ability felt less entitled to take more, they may feel more social responsibility than leaders who are appointed by authority only.

Keywords: *resource dilemmas, leadership, followers, sanction system, salient sanctions*

Effects of time perspective on perceived well-being and resiliency

GUTHRIE, L. (Tennessee State University), KNOX, P. (Tennessee Board of Regents)

Resiliency, typically viewed in terms of traumatic experiences and subsequent reactions (Lopez & Snyder, 2003), is explored here from a positive psychological perspective. Qualities such as self esteem and good problem solving skills (Maluccio, Pine, & Tracy, 2002; McCubbin, Thompson, Thompson, & Fromer, 1998) have been associated as predictors of resilience. Perceived psychological well-being and time perspective also merit examination. Three hundred and fifty-nine university students (78% African American women) enrolled in introductory psychology and elementary statistics classes in the Mid-South, completed the Resiliency Attitude Scale (RAS; Biscoe & Harris, 1994), Zimbardo Time Perspective Inventory (ZTPI; Zimbardo & Boyd, 1999), and the Scales for Psychological Well-being (PWB; Ryff, 1995). Controlling for self-identified past trauma, no differences were found by gender for ZTPI, resiliency, or psychological well-being. No significant differences were found between ethnic groups for resiliency. Differences for subscales were found for PWB Autonomy [$F(2, 279)=7.471, p=.001$], Purpose in Life [$F(2, 279)=3.488, p=.032$], Self-Acceptance [$F(2, 279)=6.409, p=.002$], and ZTPI Past-Positive [$F(2, 278)=3.744, p=.025$]. White females scored lowest on significant PWB subscales. African American men ($M=29.55, SD=2.274$) and women ($M=29.44, SD=2.827$) scored highest on ZTPI Past-Positive subscale with White women scoring the lowest ($M=27.7917, SD=2.992$). No significant differences for RAS, PWB, or ZTPI subscales were found based on "experienced

trauma prior to or since age 16". In conclusion, the findings suggest that African Americans are more nostalgic regarding the past and maintain closer family ties than Caucasian participants as evidenced by scores on the ZTPI Past Positive subscale. This is consistent with prior research indicating African Americans, more often than Caucasian Americans, tend to be involved with and to live in homes with extended family members (e.g., Bell-Tolliver, Burgess, & Brock, 2009). In contrast to other studies of PWB, African American participants also reported a greater sense of autonomy, self-acceptance, and purpose in life than Caucasians, with White women scoring lowest for each category. The skewed sample offers one explanation for our findings. Being part of the "in-group" may affect subjective well-being (Bettencourt & Dorr, 1997) and the African American collectivistic orientation (Kernahan, Bettencourt, & Dorr, 2000) offer alternative explanations.

Keywords: *time perspective, well-being, resilience, African American, caucasian*

Effects of trust and self-esteem on attitudes toward a new group following social rejection

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We examined the effects of general trust and self-esteem on attitudes toward a new group and group members after experiencing a social rejection. One model of belonging (Gardner, et al., 2005) suggests that individuals respond to social rejection by engaging in direct and/or indirect reparative strategies. Though many studies have supported this model, the role of personality as a moderator of the model has not been clarified. Therefore, we conducted the following experiment to investigate the effects of general trust and self-esteem on this model. First, participants (N = 72) were asked to communicate with two-strangers through a computer network. In the last communication, social rejection was manipulated by rejecting the participant's request to share in the conversation. Then, participants were asked to take part in the next communication task with members A and B. Before starting the next

communication task, they were asked to read the conversation record of the other communication group including members A and B, in which member 'A' was rejected. Participants were also asked to complete an attitude scale about members A, B, and the new group. Multivariate analysis indicated that the more general trust individuals have, the more positive was their attitude, because people high in general trust were not affected by one rejection experience and they could believe that they will be accepted the next time. The lower a person's self-esteem was, the lower was the difference in the attitude score about A and B (attitude score about B – attitude score about A). This possibly indicates that a person with low self-esteem predicted that he/she would be accepted by A but rejected by B. We showed that after experiencing a social rejection: (1) People high in general trust tend to accept new members regardless of what kind of person they are; and (2) people high in self-esteem are likely to become sensitive to who new members are.

Keywords: *social rejection, self-esteem, group communication, trust, group acceptance*

Effects of work values on marriage retirement desire, among female Japanese university students

OSANAI, Y. (Taisho University)

In Japanese culture, there are some females who think "When I get married, I want to quit working." However, this plan can cause conflicts between employees and employers. To solve such problems, we should learn the work values of the people who have such a life plan first. In this study, I coined the term Marriage Retirement Desire (MRD) to refer to the above life plan. Accordingly, the aim of this study was to investigate the relationship between MRD and work values among female Japanese university students. Participants were 107 female Japanese university students at private university A in Saitama Prefecture, Japan. The mean age was 19.76 years ($SD=1.33$). I utilized an item rated using a 5 point scale that measures the subjective strength of MRD and to measure work values, I utilized the items developed by Morinaga (1994, 22 items 5 point-

scale). The results showed that the item "The atmosphere of the office is good" had a significant positive influence on MRD ($R^2 = .156$, $p < .01$; $\beta = .262$, $p < .01$). At the same time, the item "There is gender equality in your workplace" and the item "There are job training opportunities" had significant negative influences on MRD among them (there is gender equality in your work place $\beta = -.243$, $p < .05$; and there are job training opportunities $\beta = -.200$, $p < .05$). From these results, we can interpret that females who seek a good workplace atmosphere but do not seek gender equality and job training opportunities at work, want to quit their job when they get married. We can see that the R^2 values are not high, which mean that we cannot fully explain MRD with work values only.

Keywords: *Marriage Retirement Desire (MRD), work values, university students, females, Japan*

Efficacy of yoga on the locus of control of female students

LOHAN, U. (Kurukshetra University), GILL, A. (Kurukshetra University)

To find out the level of locus of control among students and to find if significant differences exist between the locus of control of yogic and non yogic students. The research study employed was a descriptive survey method. The sample consisted of 60 female students in the age group of 18-25 years and was purposively selected. The sample consisted of 30 yogic and 30 non yogic students. Rotter's (1966) Scale of Locus of control was administered to the subjects. Data were analysed by computing t values. A significant difference was found between internal and external locus of control of yogic female students. Similar results were found in the case of non yogic female students. In the case of students who were practitioners of yoga, internal locus of control was found to be higher compared to their non-yogic counterparts. The non yogic female students were found to be exercising external locus of control. Yoga reduces the effects of strain and stress and induces feelings of calm and peacefulness, combats depression and anxiety, counteracts helplessness and weakness, thus, increases self esteem and internalized locus of

control. Hence, it can be empirically stated that yoga provides a path that takes one from an external to an internal locus of control.

Keywords: *locus of control, yoga, students, stress, anxiety*

Emotional correlates of dispositional altruism

DINIZ, P. (Victoria University of Wellington), GOUVEIA, V. (Federal University of Paraiba), MILFONT, T. (Victoria University of Wellington)

Research has shown that those who uphold higher levels of dispositional empathy, emotional contagion and feelings of embarrassment are more likely to help others (Batson, 1991). Other studies have proposed an 'altruistic personality' that depends more on personal attributes, like social emotions, than on situational variables (Rushton et al., 1981; Carlo et al., 1991). In line with these empirical findings, the aim of this study was to assess the relationships between specific social emotions (empathy, emotional contagion and embarrassment) and dispositional altruism. A survey questionnaire was administered to 408 undergraduate students from public and private Brazilian universities. Most of the participants were female (60.3%), single (83.9%), with a medium self-reported economic status (60.1%), and with ages ranging from 17 to 58 years ($M = 22$; $SD = 6.39$). Participants answered the Embarrassment Feeling Questionnaire, the Empathy Quotient, the Emotional Contagion Scale, the Self-Report Altruism Scale, the Scale of Social Desirability, and demographic questions. Partial correlation analyses, controlling for social desirability, showed that emotional contagion and empathy (cognitive and emotional factors) are strongly correlated to dispositional altruism ($r = .27$, $p = .001$; $r = .30$, $p = .001$; $r = .30$, $p = .001$, respectively). On the other hand, feelings of embarrassment were not correlated to dispositional altruism ($r = -.03$, $p > .05$). These findings indicate that those who are susceptible to the emotion of others and who can empathize with others' positions and feelings also tend to have higher dispositional altruism. However, dispositional altruism was not associated with feelings of embarrassment in the present

sample. Implications of the findings for social research are discussed.

Keywords: *empathy, emotional contagion, embarrassment, dispositional altruism, social research*

Emotional intelligence, alexithymia, and interpersonal problems

BESHARAT, M.A. (University of Tehran)

The aim of this study was to examine the relations of emotional intelligence with alexithymia and interpersonal problems in a sample of students. A correlational analysis was performed to assess the kind of association that exists among emotional intelligence with alexithymia and interpersonal problems. Three hundred and fifty seven students (147 boys, 210 girls) from the University of Tehran were included in this study. All participants were asked to complete the Emotional Intelligence Scale (EIS), Farsi version of the Toronto Alexithymia Scale (FTAS-20), and Inventory of Interpersonal Problems (IIP). The results revealed that emotional intelligence was negatively associated with both alexithymia and different aspects of interpersonal problems including assertiveness, sociability, intimacy, and responsibility. Results of regression analysis revealed that emotional intelligence can predict alexithymia and interpersonal problems regarding assertiveness, sociability, intimacy, and responsibility. It can be concluded that emotional intelligence is associated with alexithymia and interpersonal problems. Results and implications are discussed.

Keywords: *emotional intelligence, alexithymia, interpersonal factors*

Emotional intelligence: An exploration of the construct in adolescents

THAYER, M. (Queensland Health), BRAMSTON, P. (University of Southern Queensland)

Emotional intelligence is an emerging psychological construct with varying definitions, measures, and applications. According to the ability model of emotional intelligence, the

construct can be defined as the set of abilities that explain how we perceive, understand, and express our emotions and those of others. Research with adults shows preliminary evidence for the discriminant validity of the construct from general intelligence, personality, and well-being and positive affect, but little research has been conducted which critically examines the construct amongst adolescents. This study explored the construct with adolescents by testing the discriminant validity of emotional intelligence scores with general intelligence, personality and well-being. The study involved adolescent students ($N = 29$) from a regional Australian high school aged 12 – 17 years ($M = 14.5$, $SD = 1.2$). The Shipley Institute of Living Scale (a measure of IQ), a new performance-based measure of emotional intelligence – the Mayer Salovey Caruso Emotional Intelligence Test: Youth Version (MSCEIT:YV), a 50-item pool of personality items related to the Big-Five Personality Factors as found on the International Personality Item Pool (IPIP) on the IPIP website, and, the Personal Wellbeing Index – School Children (PWI-SC) were administered in the above order. Surprisingly, no significant results were found for the multiple correlations between emotional intelligence and general intelligence, personality and well-being. However, the study had low power (Power = .38), and so the results should be interpreted with caution. To conclude, it would appear that emotional intelligence, as measured by the MSCEIT:YV, is independent and distinct from general intelligence, personality and well-being, which is in contrast to the adult research which shows a slight but definite overlap with these constructs and emotional intelligence.

Keywords: *emotional intelligence, adolescence, general intelligence, personality, well-being*

Emotionally positive stimuli direct attention upwards in visual space: Findings from happy and sad schematic faces

MCDOWALL, J. (Victoria University of Wellington), LOVEGROVE, A. (Victoria University of Wellington)

This study aims to explore the relationship between visually presented emotional schematic faces and attention on a computer monitor. It

extends a recent finding that emotionally positive words are processed faster when they appear at the top of a computer monitor, and that negative words are processed faster when at the bottom of a monitor. Forty participants were shown schematic faces, one at a time, in the middle of a computer monitor. Faces were shown with either a smile (upturned mouth,) or a frown (downturned mouth,). After 250 msec each face was replaced by a target letter (p or q) presented either at the top or bottom of the monitor. Participants were asked to identify the letter as quickly as possible through the appropriate keyboard press. Participants completed 100 trials (50 smiling and 50 frowning), with half the target letters appearing at the top of the monitor and half at the bottom. Reaction Time (RT) was the dependent variable and Face Emotion (smiling, frowning) and Target Position (top, bottom) were the independent variables. RT to targets presented at the top of the computer screen was quicker than those presented at the bottom but only if they had been preceded by a smiling face. This finding is consistent with a small number of recent studies suggesting that emotionally toned stimuli appear to act to direct attention in visual space and that specifically emotional stimuli of a positive nature appear to direct attention upwards. The implications of this finding for the presentation and layout of visual material relevant to those in an educational setting as well as to those involved in the layout of advertising and other forms of visual material is discussed.

Keywords: *schematic faces, emotionally positive words, emotionally toned stimuli, visual presentation*

Employee share ownership and psychological ownership: Investigating the impact on employee attitudes and behaviours

ARNOLD, J. (Loughborough University Business School), MCCONVILLE, D. (Loughborough University Business School), ARNOLD, J. (Loughborough University Business School), SMITH, A. (Loughborough University Business School)

This theoretical paper considers how Employee Share Ownership (ESO) schemes may have an impact on employee attitudes and behaviours at

work; specifying ways forward for research focusing on the notion of Psychological Ownership (PO). The concept of PO has recently become popular in the ESO literature as a possible key factor in explaining the effects (or lack of them) of ESO on employee commitment, motivation and performance. However, PO appears to have been given more than one definition and has been positioned inconsistently in different models of ESO. A "possession" based definition of PO has been used in some ESO studies (e.g. "This is MY organisation; "OUR" company, see Van Dyne and Pierce, 2004). In reviewing the literature, the role of this often theorised concept, its potential relationship with United Kingdom (UK) ESO plans, and the potential avenues for future research are explored. In light of the relatively recent introduction of PO in ESO literature, it is proposed that: the design of the ESO plan; the feelings of influence and control that the employee experiences within the organisation; the information received about ESO and the company; the level of equity owned and the feelings of possession experienced as a participant in ESO, may all help explain how ESO has an impact on attitudes and behaviours. Although it is theorised (in many different ways) that ESO can enhance employees' sense of PO and lead to changes in behaviour and attitudes, these connections have not yet been tested convincingly in research. Contributing to the PO and ESO literature by taking into consideration the specific nature of UK ESO plans will assist in further understanding the impact of ESO, and how feelings of PO can evolve and have an effect on attitudes and behaviours. As stated by Pendleton et al. (1998), the underdevelopment of conceptual models in the ESO literature to guide research and analysis has contributed to diverse and often contradictory findings within the employee ownership literature (e.g. performance and employee attitudes). Psychological ownership is an emerging area in the ESO literature, and may be one way to help explain the contrasting findings.

Keywords: *employee share ownership (ESO), psychological ownership (PO), attitudes, behaviour*

Employment status and its impact on psychological well-being and health

ANDERSON, S. (University of South Australia)

Due to a combination of social, political and economic changes over the past few decades, an array of different work arrangements has emerged. This has meant that employment status is no longer restricted to those in and out of work but is spread over a continuum of work arrangements including unemployment, underemployment, part-time, and full-time employment. As a result of these changes, there is a growing need for researchers to investigate the psychological impact of the continuum of work status in order to understand the impacts of current trends in the workforce. It is particularly important to investigate working conditions as they are experienced for young people, given their reduced power to negotiate adequate work roles, and the consequences for the individuals' later life-span trajectories and well-being. Therefore, this study has been designed to examine the relationship between work status and various measures of psychological well-being and health, using a longitudinal study of South Australian school-leavers. A further aim of this study was to examine the factors that moderate these relationships. The implications of these findings for policy and future research concerning the links between work status and psychological well-being are discussed.

Keywords: *work arrangements, employment status, well-being, health*

Episodic memory inhibition and spreading activation: compared the implicit memory test to the explicit one

HOTTA, C. (Junior College), TAJIKA, H. (Kobe Shinwa Women's University), NEUMANN, E. (University of Canterbury)

First, we aimed to replicate the findings of the previous suppression studies by showing that intentional suppression effects can be obtained by using recognition and implicit memory (word/non-word) tests. Second, we aimed to examine whether inhibiting target items intentionally would impair recognition and implicit memories for items semantically and phonologically related to target ones. After

participants studied pairs of unrelated words, the cue words from each pair were presented either 0, 4, 12 times during the Think/No-Think phase. They were asked to either avoid thinking of the word (Suppress condition) or to recall it (Response condition). Finally, they were asked to recognize (Experiment 1), or judge word or non-word (Experiment 2), each of the targets and the nonstudied items, semantically and phonologically related to the items, as accurately and quickly as possible. The results showed that more target words were recognized correctly in the 0 condition than 12 repetitions under suppression condition. Also, they were slower in rejecting explicitly (Experiment 1), and implicitly (Experiment 2), nonstudied words that were semantically and phonologically related to target words under the 12 suppression condition, compared to the baseline condition. The present results are consistent with the findings of the previous studies of semantic inhibition effects. These results suggest that the episodic inhibition of suppression words might explicitly and implicitly spread to nonstudied words semantically and phonologically related to the target words.

Keywords: *intentional suppression, recognition test, implicit memory test, semantics, phonology*

Evaluation of a litter prevention campaign at the 2006 Commonwealth Games

CURNOW, R. (Community Change), CURNOW, K. (Community Change)

A litter prevention campaign was evaluated to assess its impact on littering behaviour during the 2006 Commonwealth Games in public domain areas, around games venues, and in key public corridors to and from venues. The campaign consisted of mass media advertising, clean up, and changes to 'binrastructure' (i.e., the addition of recycling bins, bin positioning and signage). Using behavioural observation, 2,009 observations of disposal behaviour were collected at 41 locations in both urban and regional areas, immediately prior to the start of the campaign in the lead up to the Games, during the Games, and one month after the Games. A systematic assessment was conducted on factors known to influence disposal

behaviour such as the amount of litter on the ground, presence of appropriate 'binrastructure' for disposal of items and venue infrastructure designed to provide a welcoming & pleasant environment for patrons. Four hundred and eighteen venue patrons were also surveyed to determine their level of support for the campaign. Before the games, as a proportion of total disposals (binning & littering), littering behaviour accounted for 33% of all disposals, similar to a 'baseline' level of 30% established in a 2005 state-wide assessment. Littering rates dropped significantly to only 9% during the Games, but were not sustained post-Games. During the games littering was reduced for both urban and regional locations but statistically significant reductions were found only in urban settings. The marked reduction in littering rates achieved during the games appeared not to be sustainable without the presence of a high profile event, appropriate 'binrastructure' and associated mass media campaign. A need for ongoing community engagement, development and support of local programs was considered likely to assist in sustaining longer term behaviour change. Continuation of temporary efforts to improve 'binrastructure', maintenance and cleaning of venues beyond special events was seen as vital to embed the social expectation to be seen to be doing the right thing in public places.

Keywords: *litter, mass media, binrastructure, behaviour change, litter*

Evaluation of emotion and regulation of emotional expression in sadness and anger: Perspectives of emotional suppression and controllability of emotion

OKUMURA, Y. (Kyushu University)

People sometimes evaluate their emotions; for instance, they feel ashamed for having been angry or, to give another example, they feel that their sadness is important and necessary. The present study investigated the relationship between the evaluation of emotion and the regulation of emotional expression. The regulation of emotional expression was seen from two viewpoints: emotional suppression and controllability of emotion. A four categories

model of regulation of emotional expression is therefore proposed including: controlled suppression, uncontrolled suppression, controlled expression, and uncontrolled expression. A questionnaire was administered to university students (N = 186: 76 men, 108 women, gender not identified = 2; Mean Age = 19.28). The questionnaire consisted of three scales: 1) Evaluation of emotion scale (Okumura, 2008); 2) Emotional suppression tendency scale (Kashimura & Iwamitsu, 2007); and 3) Controllability of emotion scale from Feelings experience scale (Nakata, 2006). The results indicated that, in the case of anger, participants with high controllability rated 'negative evaluation of emotion' as low and 'positive evaluation of emotion' as high. In the case of sadness, the result showed an interaction between suppression and controllability only for men; when suppression was rated as high, participants with low controllability (uncontrolled suppression) exhibited higher 'negative evaluations of emotions' than those with high controllability (controlled suppression). The model of the process of expression by Kennedy-Moore & Watson (1999) suggested that emotions evaluated negatively (unacceptable) is hard to express. However, the results of this study suggest that the evaluation of emotion is not related directly to suppression, but that controllability plays an important part in the relationships. The findings suggest that the viewpoints of suppression and controllability can be used for the evaluation of emotion related to the regulation of emotional expression, and to identify the features of a relationship.

Keywords: *emotions, regulation, emotional expression, emotional suppression, controllability of emotion*

Examination of the availability and utilization of learning resource materials for effective teaching in secondary schools in Kaduna Metropolis

KATO, R. (Ahmadu Bello University Zaria), OHIDAH, E.O (Ahmadu Bello University Zaria), YUWANA, M. (Kaduna Polytechnic, Kaduna)

The study examined the resource materials available for teaching in secondary schools in

Kaduna metropolis and the evaluation and utilization strategies used for effective learning in Schools. The hypotheses tested were: There is no significant difference in the mean responses of private school and public school on availability of resource materials. There is no significant difference in the mean responses of private and public school teachers regarding the criteria used for evaluation and utilization of resource materials. There is no significant difference in the response of principals and teachers regarding availability of resource materials in secondary schools. Questionnaires were responded to by 123 principals and 346 teachers in selected private and public secondary schools in four Local Government Areas in Kaduna Metropolis. Seventeen learning resource materials and fifteen criteria were identified as important for effective learning. The data collected were analyzed using mean statistics and t-test was used to test the hypotheses. Resource materials like maps, globes, bulletin board etc. are readily available in schools than others. The study further revealed that private schools followed more of the criteria identified for evaluation and utilization of resource materials than public schools. It was also found that resource materials are more available in private schools than public schools. The Government of Nigeria, in particular, Kaduna State Government and education managers really need to work to ensure that resource materials are available in schools and that they are properly utilized to enhance learning.

Keywords: *secondary schools, learning, teachers, resource materials, Nigeria*

Examining how “So” functions in a qualitative research interview

CHRISTENSEN, S. (University of Southern Queensland), BROOKS, C. (University of Southern Queensland)

The general aim of this study was to describe some of the discursive practices for managing qualitative research interviews. The specific aim was to examine the form, function, and location of so-prefaced utterances in a qualitative research interview. A conversation analysis (cf., Sacks, 1992) of 266 lines of transcribed talk from New Zealand Interview 2 (van den Berg,

Wetherell, & Houtkoop-Steenstra, 2003) on race relations in New Zealand during the 1980s was completed. First, so-prefaced turn construction units were identified in the transcript. Second, talk immediately before, during, and after each so-prefaced turn construction unit was examined to see whether it: (a) was located during an on-going action or upon completion of an action; (b) marked inferential connections in the talk or launched a new course of action; and (c) was part of an upshot, gist, stand-alone “So”, turn-change, or topic-change device. Three actions were observed, the first of which involved the interviewer using “So” to launch a new question after an answer had been received, receipted, and allowed to stand as complete. Next the interviewer used “So” to reformulate this question to be about the ‘qualities’ of New Zealand role models and to relaunch it during the respondent’s on-going but meandering answer. Finally, the respondent used “So” to reject the etic formulation of the qualities of Sir Edmund Hillary and to replace it with an alternative. However, concurrent with this reformulation, the respondent accepted as unproblematic the emic formulation of the relaunched question. “So” is an undervalued speakers’ resource. It helps organise and design turns, manage question-answer sequences, and so shapes the overall structure of a qualitative research interview. Interviewers and respondents use “So” to set and maintain a joint understanding of actions produced in a qualitative research interview. This finding displays how interviews are socially constructed and culturally informed events.

Keywords: *research interviews, discursive practices, conversation analysis, managing qualitative research interviews, so-prefaced utterances*

Examining how questions function in a qualitative research interview

CHRISTENSEN, S. (University of Southern Queensland), FIECHTNER, A. (University of Southern Queensland)

The general aim of this study was to describe some of the discursive practices for managing qualitative research interviews. The specific aim was to examine the form, function, and location of questions in a qualitative research interview.

A conversation analysis (cf., Sacks, 1992) of 266 lines of transcribed talk from New Zealand Interview 2 (van den Berg, Wetherell, & Houtkoop-Steenstra, 2003) on race relations in New Zealand during the 1980s was completed. First, question-like utterances were identified in the transcript. Second, morphosyntactic clauses were categorised using Quirk, Greenbaum, Leech, & Svartik's (1985) taxonomy. Third, the talk immediately before, during, and after each question turn was examined to see whether it was: (a) located on completion of a previous action; (b) marked by lexical elements and/or prosody; (c) repaired or abandoned; and (d) elicited a type-conforming response from the recipient. There was no direct association between the syntactic form and function so questions could be produced from declarative, interrogative, and imperative clauses in qualitative research interviews. There was no unambiguous intonation contour that marked questions, and participants used sequential, semantic, and interactional features (e.g., repairs) in the talk to recognise a question, and produce a relevant response in the qualitative research interview. Morphosyntactic form, intonation, and sequential position are inseparable in questions produced in a qualitative research interview. Recipients use these resources to recognise utterances as questions. Interviewer-interviewee interactions in the answer sequence shape intelligible answers so that are relevant to the question. Thus answers are responses co-produced by the interviewer and interviewee. These findings display how interviews are socially constructed and culturally informed events.

Keywords: *research interviews, discursive practices, questions, managing qualitative research interviews, conversation analysis*

Examining how response tokens function in a qualitative research interview

CHRISTENSEN, S. (University of Southern Queensland), GREENWAY-SHORTEN, C. (University of Southern Queensland)

The general aim of this study was to describe some of the discursive practices for managing qualitative research interviews. The specific aim was to examine the form, function, and location

of response tokens in a qualitative research interview. A conversation analysis (cf., Sacks, 1992) of 266 lines of transcribed talk from New Zealand Interview 2 (van den Berg, Wetherell, & Houtkoop-Steenstra, 2003) on race relations in New Zealand during the 1980s was completed. First, response tokens were identified in the transcript using Gardner's taxonomy (Gardner, 2001). Second, the frequency was calculated for different classes of response tokens. Third, how the interviewer and the interviewee used response tokens to maintain or change speakership, maintain or change topic, and formulate answers were examined. Response tokens are a pervasive feature in qualitative research interviews accounting for 11.47% of all words spoken. The interviewer produced 60.7% and the respondent produced 39.3% of these. Continuers (e.g., Mm mhm), news-markers (e.g., Right), and acknowledgement tokens signalling hesitancy (e.g., Uhm), delicateness (e.g. Mm) and certainty (e.g., Yes) were oriented to points of grammatical completion in the talk and located at transition relevant places. Their function was therefore consistent with Gardner's taxonomy. Response tokens were oriented to speakership enabling a speaker to hold the floor but allowing a recipient to signal continuing listenership or project an upcoming speaker's bid. Response tokens shape the trajectory of a qualitative research interview by being oriented to the immediately prior turn. Response tokens manage multi-turn answers by marking mutual understanding as an ongoing accomplishment and by dealing with insertion sequences that divert talk away from the research question. Thus, they shape the overall structure of a qualitative research interview by helping to organise and design turns and speakership. These findings display how interviews are socially constructed and culturally informed events.

Keywords: *response tokens, research interviews, discursive practices, managing qualitative research interviews, conversation analysis*

Examining how simultaneous talk functions in a qualitative research interview

CHRISTENSEN, S. (University of Southern Queensland), WHITEHEAD, M. (University of Southern Queensland)

The general aim of this study was to describe some of the discursive practices for managing qualitative research interviews. The specific aim was to examine the form, function, and location of simultaneous talk in a qualitative research interview. A conversation analysis (cf., Sacks, 1992) of 266 lines of transcribed talk from New Zealand Interview 2 (van den Berg, Wetherell, & Houtkoop-Steenstra, 2003) on race relations in New Zealand during the 1980s was completed. First, simultaneous talk was identified in the transcript. Second, acknowledgement tokens and continuers (cf., Gardner, 2001) that were produced in overlap with other talk were excluded. Third, the remaining instances were categorised using Ferguson's (1977) interruptions taxonomy and Jefferson's (1984) notes on the interactional properties at overlap onset. Simultaneous talk occurs at or near a transition relevant place where speaker change can legitimately occur. Judging a break in the continuity of the first speaker's talk was difficult and subjective. This undermines using Ferguson's criteria to categorise simple, overlap, butt-in, and silent interruptions. However examining the sequential, semantic, and interactional properties of the talk prior to, at, and following overlap onset, shows how a recipient closely attends to the talk in progress. Thus simultaneous talk is aligned to the syntactic complete-ness, adequacy, or dysfluency of questions, answers, and other actions produced in a qualitative research interview. Simultaneous talk is typically treated as interrupting, and is maligned in 'how to interview' textbooks. A focus on speaker change and breaks in verbal continuity overlook a recipient's fine-grained attention to the current speaker's talk. The orderly, lawful, and recurrent onset of simultaneous talk in qualitative research interviews point to its role in progressing this conversation. This finding displays how interviews are socially constructed and culturally informed events.

Keywords: *simultaneous talk, research interviews, discursive practices, conversation analysis, managing qualitative research interviews*

Examining physical activity participation and mood among overweight women with type 2 diabetes

MOORE, M. (Victoria University), MORRIS, T. (CARES, Victoria University)

The aim of this study was to examine the relationship between physical activity (PA) and depression among overweight women with Type 2 diabetes (T2DM). Participants were 61 overweight (BMI ≥ 25) women with diagnosed T2DM, aged between 33 and 70 years (median age = 62 years; IQR = 37). Following standard consent procedures, 600 questionnaire packs (containing information and demographic forms, mood and physical activity questionnaires, supporting letter from a Diabetes Specialist, and a reply paid envelope) were mailed out through the Baker/International Diabetes Institute. Interested overweight, diabetic women completed and returned the questionnaires, indicating consent. Response rate was low (10.2%; 61/600). Results indicated that a substantially greater proportion of participants (83.6%) reported depression ($n = 51$) than no depression ($n = 10$). There was no significant relationship between total PA and depression ($r = -.15, p = .26$); work-based PA and depression ($r = -.06, p = .62$); or leisure based PA and depression ($r = -.14, p = .27$); There was a significant negative correlation between the amount of active house-work and depression level ($r = -.25, p = .048$). There was no significant difference in depression between women in active (action, maintenance) or inactive (pre-contemplation, contemplation, preparation) stages of change ($\chi^2(1) = .17, p = .68$). To conclude, there was no relationship between depression and total, work-based, or leisure-based PA. Those with higher levels of depressive symptoms engaged in less house work (sub-type of leisure PA) than those with fewer depressive symptoms. Depression was not related to stage of change. Although the substantial number of participants reporting depression in this sample complements extensive evidence of a strong reciprocal relationship between depression and diabetes, it is greater than reported estimates of

1 in 3 diabetics having depression. The high proportion of depression in this sample may have masked any differences in PA level between those with and without depression, and may, in part, be the result of a small sample, and/or the combination of three factors (diabetes, overweight, and women) that each has a high propensity for depression. In future research, larger sample sizes should be employed and samples should include adequate numbers of participants at all depression levels.

Keywords: *Type 2 diabetes, physical activity, depression, stages of change*

Examining some discursive resources used in qualitative research interviews

CHRISTENSEN, S. (University of Southern Queensland)

The general aim of this research was to describe some of the discursive practices for managing qualitative research interviews. The specific aim was to examine some regularities in the sequential organisation of a qualitative research interview that the participants use to make this talk orderly, meaningful, and accountable. A conversation analysis (cf., Sacks, 1992) of 266 lines of transcribed talk from New Zealand Interview 2 (van den Berg, Wetherell, & Houtkoop-Steenstra, 2003) on racism and race relations in New Zealand during the 1980's was completed. The cumulative findings of four empirical studies of question formats, response tokens, simultaneous talk, and so-prefaced utterances conducted by Australian psychology honours students will be presented. Participants organise their co-presence in New Zealand Interview 2 using the normative rules for turn-taking, repair, and adjacency pairs. Thus self and other are the basic parties to the conversation; the turn construction unit is the basic metric; and projected completion points are the local basis for speaker-change. Research interviewing is motile, locally involved, and so requires close cooperation between the participants. The interviewer and the respondent use social rules derived from ordinary, everyday conversations to manage questioning, answering, and other practical actions accomplished in the qualitative research interview. Thus, fine-grained analysis of actual talk shows that interviews are socially

organised and culturally informed. This finding conflicts with conventional, neo-positive assumptions of a neutral interviewer and a passive respondent who is a vessel of answers that is common in social psychology.

Keywords: *discursive resources, research interviews, conversation analysis, interviewer, respondent*

Examining the wounded healer phenomenon: Australian students' clinical psychology career aspirations and their mental health

WATSFORD, C. (University of Canberra)

It has been suggested that mental health professionals, including psychologists, may be at risk themselves of poor mental health. The present study had two aims, which were to (a) examine whether students' with high clinical psychology career aspiration reported having a mental illness more often than students' with low clinical psychology career aspiration, and (b) to investigate the extent to which the "wounded healer paradigm" was predictive of clinical psychology career aspiration. The study utilised a cross-sectional correlational design, and used a group administered survey. Participants comprised of 330 undergraduate and postgraduate University of Canberra psychology students. Results found students with high clinical aspirations reported having a mental illness significantly more often than students with low clinical aspirations, and found the wounded healer paradigm significantly predicted clinical psychology career aspiration amongst psychology students. The study contributes additional research to the literature on the wounded healer phenomenon; however, further research is required.

Keywords: *wounded healer phenomenon, clinical psychology, mental illness, psychology students, Australia*

Exercise and social physique anxiety among adolescents

CHEN, L-J. (National Taiwan Sport University), KU, P-W. (National Changhua University of Education)

This study was designed to investigate the link between exercise and social physique anxiety (SPA) among adolescents and examine the independent effects of exercise on SPA beyond demographic, psychological and behavioral factors. Participants were recruited from 18 high schools in Taiwan. Eight classes in each school were then selected randomly. A total sample of 4230 adolescents aged 12 to 19 resulted (2223 boys and 2007 girls). Participants completed measures of demographic variables (age, gender, social economic status (SES), weight status), exercise, weight loss, smoking, drinking behaviors, and psychological variables (the nine-item SPA scale, Rosenberg self-esteem scale, contour drawing rating scale, and experience of being teased). The SES was examined by parents' occupation and education based on Hollingshead's 'Two Factor Index of Social Position'. The 'Self-Ideal Discrepancy' from the contour drawing rating is considered to be an indication of body dissatisfaction. A three-step forced entry multiple regression analysis was performed to determine how much of the variance in SPA was explained by exercise and other variables. The predictors entered into the model were exercise, followed by demographic variables. Then, psychological and behavioral variables were added in the final step. Examination of the regression coefficient showed that exercise was a significant negative predictor of SPA, accounting for 2.4% of the variance in SPA ($B(SE) = -2.34(.27)$, $p < .001$). Demographic variables were entered for the next step, adding 14.7% of the variance. Exercise was still related to SPA significantly ($B(SE) = -1.14(.26)$, $p < .001$). When behavioral and psychological variables were added to the model, the variance increased 20.1%. The final model revealed that all variables, except SES, were significant predictors, explaining 37.2% of the variance in SPA. The exercise-SPA relationship remained statistically significant even after multivariate adjustment ($B(SE) = -.69(.22)$, $p = .002$). In conclusion, this study further explores the exercise-SPA relationship with a broad range of variables. Exercise accounts for a significant amount of unique variance in the presence of demographic, psychological and behavioral variables.

Keywords: *exercise, social physique anxiety, adolescence*

Expectations, responsibility and attributions: An investigation into customers' perceptions of service failures and recoveries

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Service encounters are likely to be familiar experiences for most people in the developed world. Consequently, customers can hold quite firm expectations regarding the level of service they are likely to receive. However, despite organisations' best intentions to satisfy customers, occasionally service failures occur. A recovery attempt by the organisation often follows. A commonly reported recovery is for organisations to accept some level of responsibility for the failure. This study explored customers' perceptions of service failures and recoveries by investigating the effects of customers' pre-service expectations and service providers' self-attributed responsibility for a failure on customers' subsequent evaluations. Attribution theory provided the major theoretical framework for the study and this was compared with competing theories. In the main study, participants consisted of a convenience sample of 255 students and non-students (188 females, 65 males and 2 of undisclosed gender) with a mean age of 29.1 years. Written scenarios were employed and participants were asked to adopt the role of a restaurant patron who experienced a service failure and recovery attempt. As anticipated, customers with high pre-service expectations evaluated the failure and recovery more favourably than did customers with low or no expectations. However, contrary to predictions customers with no expectations made more favourable evaluations than did those with low expectations. A 2 (expectations: high versus low) x 3 (self-attributed responsibility: high (concession) versus medium (excuse) versus low (denial)) between-subjects factorial ANOVA did not reveal the hypothesised main effect of responsibility, or a two-way interaction effect. Attributions of locus, stability and controllability mediated the relationship between expectations and customer evaluations. When trust was incorporated into this model as an additional mediator trust mediated the relationship between expectations and customers' attributions and these attributions, in turn,

mediated the relationship between trust and customer evaluations. In summary, these findings demonstrated the value of attribution theory as an explanatory framework for understanding customers' perceptions of service failures and recoveries. The findings also have important implications for organisational marketers, particularly in the management of customer expectations and the selection of effective recovery strategies.

Keywords: *service failure, service recovery, customer's perceptions, customer evaluations, attribution theory*

Experiences of care workers at a day service for people with dementia

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Providing care for the demented elderly is a serious problem in Japan where the population is aging rapidly. In 2000, the long-term care insurance system was introduced and care was socialized. Therefore, in Japan, the profession of care workers has a short history, and as a result, various problems have emerged. Experiences of care workers at a day care service for elderly people with dementia were investigated from the perspective of care workers' interactions with users, in order to improve the quality of care and the mental health of the staff. Interviews inquiring about work experiences were conducted with care workers. The results were analyzed by referring to data obtained by participant observations. Exploratory analysis was then conducted and a structural model was constructed. Results indicated that care workers were sympathetic to the needs of users with dementia, and at the same time, felt embarrassed and sad. They considered care giving mainly as providing emotional support. Moreover, they hoped to provide care in order to facilitate the user's life with their family, after they returned home. Care workers felt sympathetic to families looking after the users at home, but sometimes doubted the words and behaviors of the family. They also felt pressure from the families. Care workers gained self efficacy through an understanding about the care of people with dementia. However, they also experienced "difficulties of understanding"

users with dementia. This generated a dilemma between the ideal and reality of care, between the ideas of the care workers and those of colleagues and the users' families. It also caused a feeling of helplessness in the staff. It is suggested that an interactive perspective to the "difficulty of understanding" could deepen the tolerance of users and reduce this dilemma.

Keywords: *dementia, care staff, quality of care, elderly people, mental health*

Exploring predictors of sustainable living using a cross-discipline, psycho-social approach

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Climate change has been described as the ultimate threat to human health and wellbeing. A number of health disciplines, including psychology, share a common mission to promote health and well-being and it is becoming clear that the most practical pathway to achieving this mission is through interdisciplinary collaboration. In order to achieve meaningful reductions in individual ecological footprints, individual citizens will need to dramatically alter their energy consumption and day to day habits. Any interventions will need to be evidence based and there will need to be a rapid transfer or communication of information from the point of research, into practice. This research explores the predictors of the environmentally friendly behaviour using a cross-disciplinary psycho-social approach. Through consultation with industry experts and local council liaison officers the aim of this research is to provide data that it is both theoretically driven and as practice relevant as possible. Following a qualitative pilot study, and in consultation with an expert panel and industry experts, we constructed a self-administered mail survey which was distributed to a random sample of 3000 residents of Brisbane and Moreton Bay. The survey was primarily informed by the Theory of Planned Behaviour and asked about attitudes, norms, perceived control and intention, as well as a number of other constructs such as

environmental concern and altruism. A second, follow-up survey was conducted four weeks after a receipt of a completed survey, which specifically asked about recent walking for transport and switching off lights behaviours. Thus far there has been a response rate of 40% ($N = 1175$) for the initial survey and approximately 65% for the follow-up survey. Attitudes ($r = .44$) prescriptive norms ($r = .19$) environmental altruism ($r = .25$) and environmental concern ($r = .17$) are all significant predictors of switching off lights and similar results are emerging for other sustainable practices. As a result of the contact with industry and academic experts, we have been able to forge alliances with a number of state and local government representatives who are keen to apply the findings of this research in real world applications. This research will inform a comprehensive and practical model for predicting sustainable living behaviours and, importantly, at least three local councils have expressed an interest in making use of the results of this study as part of their ongoing community engagement programs.

Keywords: *sustainable living, environment, ecological footprints, psycho-social approach, Theory of Planned Behaviour*

Exploring the impact of purpose in life and seeking of neotic goals on depression and anxiety in a student population

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The research presented aimed to explore the impact of Purpose In Life (PIL) and Seeking Of Neotic Goals (SONG) on symptoms of depression and anxiety in university students. Three hundred and ninety eight female and male students ranging from young adulthood to middle aged, completed measures of PIL, SONG, Zung Self-Rating Depression Scale, and Zung Self-Rating Anxiety Scale. Interpretation of the results revealed that a high level of PIL predicted lower depressive and anxious symptomatology, and a low score of SONG predicted lower scores of depression- and anxiety-related symptoms, verifying the hypotheses outlined at the outset. Additionally, a gender difference was evident amongst total scores of depression which found

that females reported significantly higher scores than males, as predicted. However, PIL, SONG and anxiety scores did not significantly differ in males and females as predicted. Furthermore, the study investigated the relationship between depression and anxiety by analysing the underlying factors of the SAS and SDS scales and further validated the tripartite model of positive affect, negative affect and somatic anxiety in a university sample. The findings of this study showed a general trend that when an individual has meaning in life and thus a purpose, they are protected from the detrimental effects of depression and anxiety, highlighting PIL as a buffer. SONG in comparison was found to increase signs of depression and anxiety, indicating that an intense motivation to find a meaning in life may hinder and thus deter an individual from ever reaching that goal and as a result increase their levels of anxiety and depression.

Keywords: *Purpose in Life (PIL), neotic goals, depression, anxiety*

Facial electromyographic study of accumulative negative affect related to social exclusion

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Social exclusion is ubiquitous in human society and has a strong effect on cognition, emotions, and behavior. Previous studies have demonstrated that a short period of face-to-face ostracism provokes negative affects and lowers the level of the four fundamental belonging needs: belonging, control, self-esteem, and meaningful existence (Williams, 1997, 2001). It has been reported that this effect can also be caused by ostracism on the Internet, even when the ostracizing others are computer-generated players (Williams, 2000; Zadro et al., 2004). Functional magnetic resonance imaging studies have indicated that social exclusion provokes social pain that is reflected in activation of the anterior cingulate cortex (Eisenberger, et al., 2003). However, the time course of negative affects resulting from social exclusion remains unclear, because previous studies have focused mainly on post-exclusion feelings, or experiences

of overall social exclusion. Therefore, the increased negative affects in response to social exclusion were investigated by measuring facial electromyographic activity over corrugator supercilii and zygomaticus major as an index of negative and positive affects, respectively. University freshmen ($n = 23$) individually participated in an experiment in which they played a simple computer-simulated ball-tossing game (Cyberball) with two computer-generated players. First, they were asked to observe the other two players tossing the ball to each other (observation condition). Then, they joined in the game (inclusion condition). The computer was programmed such that the other players suddenly excluded the participants (exclusion condition). Similar to previous studies, participants reported negative affects and a reduction in the four fundamental belonging needs. The activity of corrugator supercilii increased continuously in all conditions during the game period and increased dramatically in the middle of the exclusion condition. This increase was associated with lower self-esteem ratings and higher negative affects across individuals. In contrast, the activity of zygomaticus major continuously decreased in all conditions during the game period and no significant differences in activity were observed among the three conditions. These findings indicate that the negative affects produced by social exclusion may accumulate during exclusion. It is suggested that corrugator supercilii activity can be used as a valuable real-time index of negative affects in social exclusion research.

Keywords: *social exclusion, facial electromyographic activity, belonging, meaningful existence, self-esteem*

Facial emotion perception in people with schizophrenia and their non-psychotic siblings: A functional magnetic resonance imaging study

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Schizophrenia is a heritable disorder. However, molecular genetics and related research areas have not unmasked the nature and mechanisms of this disorder. Therefore, many researchers

begin to explore the pathology mechanism from other approaches. High-risk study is one of the promising approaches. In this study, we mainly focused on facial emotion perception in schizophrenia and their non-psychotic siblings, and attempted to explore whether facial emotion perception is the potential biological marker of schizophrenia. Functional magnetic resonance imaging (fMRI) was used to assess the emotional related cortical physiology in 12 patients with schizophrenia, 12 non-psychotic siblings of patients and 12 healthy controls, during the facial emotion perception task. The results indicated that patients with schizophrenia demonstrated abnormal activation in emotional processing, mainly on the social brain and the limbic systems in comparison with healthy controls. Compared with healthy controls, patients demonstrated lower activation in frontal gyrus, lentiform nucleus, thalamus, and caudate nucleus when processing the positive emotions, while showed lower activation in frontal gyrus, parahippocampal gyrus, and fusiform gyrus when processing the negative emotions. Siblings of patients demonstrated abnormal activation in left frontal gyrus, bilateral superior and middle temporal gyrus, bilateral parahippocampal gyrus, and bilateral insula in contrast with healthy controls. These fMRI data showed direct evidence of abnormality in dorsal and ventral systems in siblings of the patients. The current findings suggest facial emotion perception may be a potential biological marker of schizophrenia in neuromechanisms.

Keywords: *schizophrenia, facial emotion processing, schizophrenia, neuromechanisms, functional magnetic resonance imaging*

Factors affecting environmental practice career choice: A test of social cognitive career theory and values-beliefs-norms theory

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Social Cognitive Career Theory (SCCT) and Value-Belief-Norms Theory (VBN) were selected as theoretical frameworks for investigating environmental practice career choice. The initial study aim was to test the theoretical hypotheses

of SCCT and VBN theory to assess their suitability for investigating career choice goals in environmental practice students. The secondary aim was to investigate the relative predictive power of SCCT and VBN models and to determine whether the combination of VBN and SCCT as an additive model produced a significant improvement in the prediction of environmental practice career goals. Participants consisted of 640 students, enrolled in a range of environmental practice courses from across seven Queensland universities. Participants completed a 20 minute online questionnaire that contained measures for SCCT, VBN theory and background variables. Analyses consisted of a range of multiple regression and mediation analyses. The theoretical hypotheses for both SCCT and VBN theory were supported. When background variables were investigated as a predictive model they explained 10% of variance in career choice goals. When SCCT, VBN and background variables were combined, the full model significantly predicted 37% of variance in career goals. Outcome expectations, interests, social supports, and ascription of responsibility were all significant predictor variables in this full model. SCCT separately predicted 28% of variance in career choice goals. This was significantly larger than the 12% predicted by VBN theory. When the VBN model was combined with the SCCT model, VBN variables significantly improved prediction of career choice goals by 4%. When the VBN model was combined with the SCCT model, a large proportion of the original VBN predictive value was redundant in the combined model. However, the addition of VBN variables is still useful as VBN theory explained a significant and unique 4% of variance in career choice goals, not explained by SCCT. Based on this application of SCCT and VBN theory in explaining environmental career choice, implications for training, development and human resource management in this rapidly growing and diversifying sector are discussed.

Keywords: *Social Cognitive Career Theory, Value-Belief-Norms Theory, environmental practice career choice, career goals, human resources*

Factors influencing the university students' motivation for learning: A cross-sectional and longitudinal analysis

of first year to third year Japanese university students

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In Japan, the levels of both academic motivation and academic ability are decreasing in proportion to the increasing number of students attending higher education. Some studies show that the level of academic motivation of university students varies depending on the stage in the university cycle that the students are in. Therefore, it is essential that we consider the factors influencing the motivation according to the stage that each student is in when we examine the academic motivation of the students. The main purpose of this study was to examine the factors which influence university students' motivation for learning using a cross-sectional and a longitudinal study. In Study I, a questionnaire was administered in 2006 to 183 first year to third year students in a cross-sectional study. In Study II, other questionnaires were administered 3 times to 54 students from January 2005 in a three year longitudinal study. The major findings from Study I and II were as follows: (1) Motivation for learning was lowest in the second semester of the first year in both the cross-sectional and the longitudinal studies; (2) in addition to interest in classes, successful adaptation to university life and good future prospects led to an increase in the students' academic motivation in all years. On the other hand, daily life outside of studying, loss of interest in their studies and getting used to university life led to a decrease in the students' academic motivation in all years. Thus, other factors beside contents of classes and the ways of teaching were also shown to influence students' academic motivation; and (3) the combination of factors was different for each year level. In addition, certain factors were seen to have a stronger influence on motivation for some year levels than for others. From these results, the level of motivation for learning and factors influencing academic motivation varied for each year level. We concluded that the students' stage in the university life cycle should be considered when examining motivation for learning.

Keywords: *academic motivation, learning, university life-cycle, students*

False consensus effect on socially inconsiderate behavior and prosocial behavior

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The false consensus effect (FCE) refers to the tendency to overestimate consensus for one's own judgments and behaviors. Past studies (e.g., Ross et al., 1977) examined the FCE in ambiguous situations. However, the judgments and behaviors in the ambiguous situations cannot generally make social evaluation (negative-positive). This study examined whether participants produced the FCE for social inconsiderate behavior and prosocial behavior which received social evaluation (negative-positive). This study also investigated the relationship between the FCE for social behavior and assumed-competence (Hayamizu et al., 2003). Undergraduate students ($N = 217$) completed a questionnaire consisting of social behavior items and assumed-competence scale, and estimated the percentage of the consensus for social behavior items. There was a total of 27 items in social behavior. Fifteen items described situations that were negative (socially inconsiderate behavior) and the other twelve items were related to positive behavior (prosocial behavior). Assumed-competence scale (ver. 2) consisted of 11 items. Each item was a statement where the participant inquired about the range which undervalues others. The results indicated that the participants overestimated the consensus for social behavior; thus, the false consensus phenomenon showed robustness. Moreover, the results revealed that the participants who frequently exhibited socially inconsiderate behavior produced a stronger FCE ($t(100) = 6.04, p < .001$). Finally, the results showed that high assumed-competence underestimated the agreement of prosocial behavior ($t(203) = 3.41, p < .001$). These findings suggest that and the participants justified themselves by predicting that the judgments and behaviors of others were similar to those of their own. Moreover, assumed-competence related to positive social behavior (prosocial behavior). This study examined FCE for social behavior which received evaluation socially. The results

showed the stoutness of FCE which confirmed preceding research.

Keywords: *behaviour, prosocial behaviour, socially inconsiderate behavior, false consensus effect, judgement*

Female drug addicts' personality: Using Five-Factor and Eysenckian Model

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There is paucity of studies on the personality of female addicts employing Five-Factor Model as well as Eysenckian Model, especially in an Indian context. Therefore, an attempt is made in the present study to explore the personality-addiction relationship on female drug addicts. A sample of 50 female addicts and a comparison sample of 50 female non-addicts matched on age, education, income/occupation were administered Revised Eysenck Personality Questionnaire (EPQ-R) and Revised NEO-Personality Inventory (NEO-PI-R). A difference score was calculated for each pair for each personality variable. MANOVA was used to find out the differences on personality variables. Facetwise analysis and exploratory analysis were carried out. The results supported the hypotheses. Female addicts scored high on Eysenckian Psychoticism (P), Neuroticism (N) and low on Lie scale; and high on Neuroticism (N), and low on Agreeableness (A) and Conscientiousness (C) of the NEO-PI-R. The results demonstrated the cross-cultural applicability of Eysenckian as well as Five-Factor Model in the area of personality of addicts and also provide an evidence for validity of EPQ-R and NEO-PI-R in an Indian setup. Female addicts scored high on Eysenckian Psychoticism (P), Neuroticism (N) and low on Lie scale; and high on Neuroticism (N), and low on Agreeableness (A) and Conscientiousness (C) of the NEO-PI-R than the comparison group.

Keywords: *personality, big five model of personality, drug addictions, NEO-Personality Inventory, Eysenckian model*

Financial planning and well-being

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The aim of this paper is to provide a review of the theoretical and research literature on the ways in which financial planning can enhance well-being. In reviewing the literature, the paper develops a conceptual framework for thinking about the extended value of financial planning, beyond financial outcomes, by examining the process of planning in the financial domain and its relationship to life satisfaction, living an intentional life, attainment of life goals, and the development of a sense of mastery. An essential element of psychological well-being is engagement in life tasks and roles. Planning can be considered a life management strategy that enables individuals to control and structure their lives. Having meaningful goals and the plans to achieve those goals enable individuals to experience higher levels of life engagement and well-being (MacLeod et al., 2008). Recent research on well-being suggests that domain-specific behaviors contribute to domain-specific satisfactions, which in turn contribute to an individual's overall satisfaction with life (Easterlin, 2003; 2006). Thus changes in domain satisfaction, such as financial satisfaction, are likely to affect changes in life satisfaction. This paper analyses the financial planning process through the key mechanisms of resource appraisal, functional goal setting, and progress towards and attainment of goals, and identifies the ways in which these activities may have an impact on subjective and psychological well-being. This conceptual analysis and synthesis is aimed at expanding current thinking about the value of financial planning to considerations of subjective and psychological well-being. This improved understanding will be of benefit to researchers, financial educators, financial counsellors and financial planners.

Keywords: *goal setting, financial planning, psychological well-being, satisfaction*

Flow state and performance in competition

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Flow state is characterized by enjoyment and a positive experience in the activity. Therefore, flow state plays an important role in sport competition as the experience helps athletes to get the most out of themselves, which could make a difference between winning and losing. The aim of this study was to examine flow dimensions as predictors of performance outcome, and differences in flow experience between successful and unsuccessful athletes. The sample consisted of 188 tennis players between 12 and 18 years of age ($M = 14.18$; $SD = 1.50$). Participants completed the Flow State Scale-2 (FSS-2; Jackson & Eklund, 2002) following the tennis competition and match results were obtained from the tournament organizers. Overall, 111 participants won and 77 lost their competition match. Regression and t-test analyses were applied. The nine predictor variables of flow state explained 13% of the variance in games won (only significant predictor was autotelic experience, $\beta = .27$). Measuring performance by games lost, 16% of the variance was accounted for. Sense of control ($\beta = -.47$) was a significant negative predictor of performance, whereas concentration on the task at hand ($\beta = .32$) was a significant positive predictor. A Bonferoni adjusted p value was calculated to account for repeated measurement and to uphold the 5% significance level. Based on the adjusted .006 cut-off level, significant differences in flow state between winning and losing participants were found for challenge-skills balance, clear goals, sense of control, and autotelic experience. The d values for these variables were moderate, ranging from .47 to .66. An interesting, but unexpected, finding was that athletes' concentration levels rise when performance is not optimal, indicating concentration might be more important for athletes losing rather than winning their competition. It is possible that athletes perceived higher concentration when they consciously needed to adjust to match challenges, whereas during a winning performance their focus might be on autopilot. Differences in flow between winning and losing performance were confirmed, showing several flow characteristics were significantly higher for participants who won their competition match.

Keywords: *performance outcomes, flow, athletes, concentration, sense of control*

Forgivingness and gratitude among older people

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This study examined whether the three constructs of forgivingness found in adults – propensity to lasting resentment, sensitivity to circumstances, and willingness to forgive – were also present among older people. It sought also to determine whether gratitude accounted for a significant portion of the variance beyond that of socio-demographic variables in the study of forgivingness. One hundred and nine older people (65 females and 44 males; mean age 70.3 years) participated in the study. The same three-factor structure that was found among adults was also found among older people. Hypotheses of a negative correlation between lasting resentment and gratitude, and a positive correlation between overall propensity to forgive and gratitude, was supported. Additionally, results using multiple regression models indicated that gratitude explained a significant amount of variance of lasting resentment, and overall propensity to forgive.

Keywords: *forgiveness, gratitude, older people, resentment*

Fruits and vegetables consumption and associated factors among in-school adolescents in seven African countries

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This report examines fruits and vegetables consumption and associated factors among 13 to 15 year-old in-school adolescents in seven African countries. This is a cross-sectional survey with a total sample of 17656 school children aged 13 to 15 years from nationally representative samples from seven African countries. Univariate and multivariate analyses were conducted to assess the relationship between fruits and vegetables and

sociodemographics, behaviour variables, mental distress and protective factors. Thirty six percent and 23% of 13 to 15 year old boys and 32.6% and 22.3% of the 13 to 15 year old girls had inadequate fruits and vegetables consumption (less than one or more per day). In multivariate analysis, inadequate fruits consumption was associated with going without food (OR = 1.50, $p = .001$), smoking (OR = 1.52, $p = .004$), lack of care giver connectedness (OR = 1.41, $p = .000$), being male (OR = 1.23, $p = .012$) and higher education (OR = 1.56, $p = .001$) and inadequate vegetables consumption was associated with lack of care giver supervision (OR = 1.57, $p = .000$), no close friends (OR = 1.55, $p = .000$) and have less education (OR = 0.73, $p = .002$). The results stress the need for intervention programs aimed at increased consumption of fruits and vegetables among adolescents. Interventions to increase fruit/vegetable intake in adolescents need to target socio-environmental factors such as greater availability of fruits/vegetables.

Keywords: *fruit and vegetable consumption, adolescent food consumption, mental distress, care giver connectedness, education*

Functional and dysfunctional anger response tendencies in secure and insecurely attached adults

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Attachment theory argues that there exists different attachment-related strategies in affect regulation developed from a lifetime of interactions with significant others. The present study used an emotional Stroop task to explore functional and dysfunctional anger response tendencies of securely and insecurely attached adults. It was hypothesized that secure individuals would show greater interference when naming the colour of functional anger items, whereas those with insecure attachment (anxious and avoidant individuals) would show greater interference when naming the colour of dysfunctional anger items. The sample ($N=60$) consisted of 13 males and 47 female first and second year Psychology students. With regard to attachment style as measured by the Attachment Style Questionnaire, 31 participants identified as secure, 20 were avoidant and 4

participants identified as anxious. Included in the emotional Stroop task were 12 functional (negotiate, clarify, discuss), 12 dysfunctional (retaliate, revenge, attack), and 12 control target items. Each stimulus item was randomly presented three times in one of three colours (red, green or yellow), which made 36 trials per condition and a total of 108 experimental trials. The design was a 3x3 mixed factorial design defined by target type (functional, dysfunctional, control) and attachment style (secure, anxious, avoidant). The dependant variable was the reaction time to target stimulus. Data analysis indicated no significant main effect for target word, no significant main effect for attachment style, and no significant interaction for attachment and target. Reaction times for functional and dysfunctional anger items did not reflect the relational schema underlying participants' attachment style. The experimental results provide some evidence that the cognitive representation of anger is not dependant on attachment style.

Keywords: *anger, attachment style, stroop task*

Gaming experience and knowledge as predictors of gaming skills

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The current study examines self-reported gaming experience and knowledge as predictors of actual gaming skills. Over 50 military service members completed the Game Experience Measure (GEM) and the Game-Based Performance Assessment Battery (GamePAB) as part of a research study conducted in the Defense Equal Opportunity Management Institute (DEOMI) Simulation Training Lab. The GEM is an instrument that measures an individual's prior experience with and knowledge of gaming. It assesses general gaming experience, frequency of play in various genres of games, level of experience with respondent's favorite games, and level of experience with various gaming controllers. Overall gaming knowledge and specific

knowledge of first-person shooter games are also measured. The GamePAB measures the participant's demonstrated level of gaming skills. It uses standard first-person shooter navigation controls in two separate tasks components. The first task requires the participant to follow a leader through an environment while imitating the leader's movements and responding to questions about the surrounding virtual environment. The second task has the participant aim their weapon at a moving target, requiring the participant to keep the weapon on track and fire when prompted. Linear regression results indicate that the following/navigation task was significantly predicted by: overall gaming experience ($\beta = 0.49$; $p < .001$); general gaming experience (e.g. frequency of play) ($\beta = 0.56$; $p < .001$); first-person shooter knowledge ($\beta = .34$; $p < .05$); and general gaming knowledge ($\beta = 0.30$; $p < .05$). First-person shooter knowledge significantly predicted shot reaction time ($\beta = -0.38$; $p < .05$), while general gaming knowledge significantly predicted aiming skill ($\beta = 0.365$; $p < .05$). The task of imitating the leader's movements was not significantly predicted by any experience or knowledge measure. Overall, these results demonstrate that self-reported gaming experience and knowledge may significantly predict some aspects of gaming skill, but may not provide a sufficiently accurate representation of an individual's level of gaming performance. These findings suggest the need to provide additional training on basic gaming skills prior to participating in Game Based Simulations.

Keywords: *game based simulation, gaming, military, training*

Gender differences in face recognition ability

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The present study aims to explore gender differences in face recognition ability and the results will affect a lot for applied purposes in justice. Based on the 'learning-test' memory recognition paradigm, the experiment is a three-factor 2x2x2 mixed design, manipulating participants' gender (between-group factor, male/female), photo gender (within-group

factor, male/female) and external features of face photos (hair, neck, etc., between-group factor, with/without). The dependent variable is d' which is calculated by using hit and false alarm rates which was retrieved in the test stage. Participants are 120 college students. When dealing with photos with external features, all participants show better performance in identifying a female face than male face; and female participants show better performance in identifying female faces than male participants. When the face photos have no external features, all participants are still better at identifying female faces than male faces; but there are no differences between male and female participants when they remember face photos. To conclude; (1) females remember more faces with external features than males; there is no difference in face recognition between females and males while recognizing faces with no external features; (2) females are better at identifying female faces which shows the females' own gender bias; males are also better at identifying female faces which shows the existence of a reverse gender bias; and (3) participants are better at identifying photos with external features than those without external features; with external features, the females' own gender bias is more significant.

Keywords: *gender differences, face recognition, external features*

Gender differences in gaming experience and ability

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The military is increasingly using Game Based Simulation (GBS) for training a variety of tasks. Traditionally, the focus has been on using GBS for training operational tasks (e.g. pilot and infantry training); however, GBS is now being incorporated into non-kinetic interpersonal skills training. The Defense Equal Opportunity Management Institute (DEOMI) is collaborating with other Department of Defense agencies to

develop GBS in the areas of Military Equal Opportunity, diversity management, and cross-cultural competency training. An important first step in this training development is to determine the average gaming experience and skill level that DEOMI students possess, as this will determine the amount of time needed to train basic gaming skills before conducting full simulated training interactions. The current study examines gender differences in student responses to the Game Experience Measure (GEM) and the Game-Based Performance Assessment Battery (GamePAB). The GEM is an instrument developed to measure participants' prior experience and knowledge of video games, while the GamePAB is an actual performance measure that incorporates common tasks from standard first-person shooter games. Over 50 participants from all branches of the military and the United States Coast Guard completed the survey. Results from the GEM sessions indicate significant gender differences in the self-reporting of gaming experience and knowledge, with males scoring higher on experience in general ($t = 2.42$; $p < .05$), experience in specific gaming genres ($t = 2.84$; $p < .01$), various controllers ($t = 2.29$; $p < .05$), and overall experience ($t = 2.80$; $p < .01$). Male participants also showed higher scores on first-person shooter game knowledge ($t = 5.40$; $p < .01$), as well as general gaming knowledge ($t = 3.23$; $p < .01$). GamePAB results demonstrate higher scores for males on basic navigation (following a leader; $t = 3.43$; $p < .01$) and aiming skills (keeping weapon on target track; $t = 2.68$; $p < .01$). These results indicate that female service members may require additional training on basic gaming skills before engaging in interactive GBS training.

Keywords: *gaming, training, military, game based simulation*

Gender differences in traditional and internet commerce: What is different between both stages?

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Consumption is a fundamental activity among people living in 21st century society. We can find in the biography many variables related to consumption experiences. This situation becomes more complicated considering internet commerce as a new consumption stage that has experienced significant growth in the last few years. Considering this situation, the present research had two main objectives. The first objective was to determine which variables relate to the consumption experience between men and women, and at this point we aimed to identify gender differences related to consumer behavior. The second objective presented a comparison between the traditional consumption stage and the new consumption internet stage. Our aim here was to determine how gender differences apply to both stages. Our question was: what is different and what is similar? For these purposes we worked with two independent samples. The first one comprised 233 traditional shoppers and the second 205 internet shoppers. We compared men and women's punctuations for different consumption variables in the two samples. In the traditional stage men and women present differences in many variables, such as perceived service quality, perceived fairness, word of mouth and positive affect. In the internet stage we find gender differences in only 3 of the variables: involvement, re-buy intention and diversion. Our results reveal significant gender differences between men and women in traditional markets but in the internet market such differences between men and women tend to disappear.

Keywords: *gender differences, traditional commerce, internet commerce, consumption, shoppers*

Gender on ice

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This study examined the experiences and attitudes of women towards living and working in remote and isolated Antarctic stations. The participants were 14 women who participated in Australian Antarctic expeditions between 1985 and 2000 and who were interviewed for the study. On the basis of a thematic analysis of

interview data, two recurring and pervasive themes were identified: (i) reference to the Antarctic environment as one of the best aspects of their experience and the reason they would recommend the Antarctic to their friends as a good place to work, and (ii) reference to a plethora of social issues, including the impact of interpersonal conflict on individual and group functioning. These themes are discussed within the context of the organisational culture of Australian Antarctic stations. The implications for expeditioner selection and recruitment procedures are outlined and recommendations are presented.

Keywords: *Antarctica, isolated Antarctic stations, social issues, interpersonal conflict, remote*

Group membership and drinking motivations: A study on the role of perceived group norms on self-reported alcohol consumption among Italian adolescents using the Theory of Planned Behavior

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The study tested the role of group and individual variables in the prediction of alcohol consumption among Italian adolescents. Starting from the Theory of Planned Behavior (TPB), we tested the relative power of "descriptive" vs. "prescriptive" social norms in predicting self-reported alcohol consumption. A paper-and-pencil questionnaire was administered to 876 Italian high school students, measuring the usual TPB components (attitudes, subjective norms, perceived behavioral control, behavioral intentions and behavior) plus two additional components: perceived norms of the group of friends and past behavior. Four different drinking motivations previously identified in the literature were also measured (i.e., coping with negative emotions, enhancing positive experiences, conformism, and social motives). As

expected, perceived norms of the group of friends, which represent a "descriptive" normative source, emerged as a better predictor of intentions to drink, compared to the classical TPB construct of subjective norms, which represent a "prescriptive" normative source. Hierarchical multiple regressions showed also that past behavior is a strong and independent predictor of alcohol consumption. Concerning drinking motivations, results showed a link between social motives and self-reported drinking behavior: as predicted, social motives also mediate the relation between group norms and drinking behavior. Results confirm the hypothesized interplay between individual and group factors involved in alcohol consumption among adolescents. Taken together, these findings confirm also the adaptability of the TPB to this particular behavioral domain. However, variables at the individual and group level (such as past behavior and perceived group norms) might play a role that goes beyond that of attitudes, subjective norms and perceived control in shaping drinking behavioral intentions.

Keywords: *group membership, social norm, motivation, behaviour, alcohol*

Gynecological cancer survivors: Assessment of psychological distress and unmet supportive care needs

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This preliminary investigation provides findings of a study of gynecological oncology survivors and their psychosocial well-being and unmet supportive care needs, and further contributes to the evaluation of the CaSUN, a new Australian measure of such needs in cancer survivors. In a cross-sectional self-report study, 45 gynecological cancer survivors (0.9 to 11.6 years since diagnosis), completed clinical measures of anxiety (SAI), depression (BDI-II), post-traumatic stress disorder (IES-R), quality of life (FACT-G), optimism (LOT-R), coping style (B-COPE), and the CaSUN 'strength of unmet needs' outcome. Results indicated a total of 28.9% of participants reported clinical levels of anxiety, 20.0% reported mild-to-severe symptoms of depression, and 15.6% were in the clinical range for a probable diagnosis of post-traumatic stress

disorder (PTSD). Strong positive associations were found between strength of unmet needs and anxiety ($r = .66$), depression ($r = .68$), and post traumatic stress disorder (PTSD; $r = .61$). Poorer quality of life (QOL; $r = -.76$), younger age ($r = -.21$), and greater time since diagnosis ($r = .20$) were also associated with stronger unmet needs. Multiple linear regressions showed clinical measures of anxiety, depression, PTSD, total QOL, optimism, and self-blaming coping style only explained 56.4% of the variance on the CaSUN 'strength of unmet needs' outcome thus suggesting the new measure explained still further variance. Alternatively, for the strongest unmet need (fear of recurrence), a model including anxiety, optimism, PTSD, and emotional well-being accounted for 40.7% with emotional well-being the strongest predictor ($\beta = -.55$, $p = .01$). In conclusion, this study highlighted the type and frequency of psychological and unmet supportive care needs of gynecological cancer survivors suggesting good feasibility for completing another larger study utilizing the CaSUN as an appropriate addition to our understanding of survivorship. As in previous studies, these findings suggest fear of recurrence of cancer is perhaps the most prominent unmet need of such survivors. Furthermore, we make suggestions to consider clinical interventions concentrating on impacting emotional well-being across the cancer journey to address such fears as this appears a particularly important factor.

Keywords: *gynecological oncology, emotional well-being, unmet needs*

Hardiness and self-esteem as predictors of job stressors

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The purpose of this study was to examine the relationship between the outcomes of work stress and two of the potentially protective resources (i.e., hardiness and self-esteem). One hundred Azad University staff, with a mean age of 38.18 ($SD=5.32$), completed a questionnaire packet which included the Personal Views Survey (PVS; Hardiness Institute, 1985), Self-esteem Scale (Rosenberg, 1965), and the Measures of Job Stressors (Spector & Jex, 1998).

The latter consisted of the Interpersonal Conflict at Work Scale (ICAWS), Organizational Constraints Scale (OCS), and Quantitative Workload Inventory (QWI). As expected, and consistent with previous studies, hardiness and self-esteem had a negative correlation to the job stressors, and could significantly predict interpersonal conflict, organizational constraints, and quantitative workload. Some possible mechanisms underlying the stressors-outcome relationships and their implications have been discussed based on the control model of the job stress process.

Keywords: *hardiness, self-esteem, work stress, organizational constraints, quantitative workload*

Hasty behavior and driving behaviors

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This paper aimed to introduce a new concept regarding hasty behavior and the relationship between hasty behavior and driving, and to suggest the direction of hasty behavior research. For this paper, we collected studies related to hasty behavior and created a summary of hasty behavior's characteristics. Lee and Park (2007) became interested in the predisposition of taking action in a hasty manner, and found that hasty behavior is the result of time pressure, discomfort, isolation, boredom, and expectation of rewards. Since that study, Lee and Park (2008) have suggested that hasty behavior means not only to simply do one's work hurriedly, but also includes the ideas of positivity or a sense of purpose. They confirmed the five factors of haste and found two hasty behavior domains – missing confirmation and the need for achievement. They reported that mistakes or accidents, if combined with a lack of confirmation and a need for achievement, were all connected to task performance positivity and to accomplishing the goal. Kim, Park, and Lee (2009) investigated the relationship between hasty behavior and driving behavior – violation, error, and lapse. Violations were not affected by missing confirmation domain. However it was found that drivers with high scores in the missing confirmation domain made more errors and committed more lapses. Therefore they

have insisted that to link hasty behavior and mistakes or accidents is possible. The hasty behavior, or “Pali-Pali” culture, of Koreans is quite famous. However, it is not easy to fund research on hasty behavior. The concept of hasty behavior, as achieving an optimal goal while increasing the speed of action, being recently considered, is not familiar. Researchers with regard to hasty behavior have shown new meaning related to hasty behavior. The items in the hasty behavior questionnaire may not actually be applicable to humans as a whole, regardless of age and culture. The relationship between the two hasty behavior domains is not clear; continuing research should resolve these issues. Furthermore, an awareness of personal hasty behaviors should enable individuals to predict mistakes, accidents, and achievement in task performance.

Keywords: *driving behaviour, hasty behavior*

Hepatitis B and HIV-related stigma in China

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Many patients suffer from HIV-related stigma in China, and even more suffer from hepatitis B stigma. These two kinds of illnesses are both chronic, hard to cure, and can be transmitted through sexual contact, which seems a significant indicator of stigma. A majority of researchers concentrate on HIV-related stigma in both China and overseas, while hepatitis B stigma remains grossly understudied. This study tried to compare hepatitis B and HIV-related stigma towards the patients and their families. The dimensions of illness characteristics influencing these two kinds of stigma in Chinese culture were also discussed. Possible stigma reduction strategies were suggested. Questionnaire surveys were carried out in universities, and 179 individuals responded. The questionnaire contained three parts: the stigma towards the patients, which included negative stereotype, bias, and the tendency of discriminate, the stigma towards the patients' family members, and the participants' perception of the illnesses' characteristics. Structured interviews were used to help get a

better understanding of the results. The data analysis shows that the HIV-related stigma towards both patients and their family members is significantly stronger than the hepatitis B stigma, especially concerning the negative stereotype to the patients. Also, the stigma towards the patients' family members is related to the stigma towards the patients. Behavioral causality/control of the illness is an important indicator to hepatitis B stigma, while getting in contact with an affected person may be an effective way to reduce it. In the meantime, sexual transmission is the most important indicator that causes HIV-related stigma. In conclusion, the participants demonstrate both hepatitis B stigma and HIV-related stigma, and they are significantly different in both force and manifestation. Besides, the illness stigma extends to the patients' families. Furthermore, statistically significant correlations are found between the facts concerning illness and the illness stigma.

Keywords: *stigma, China, HIV, Hepatitis B, sexual transmission*

Homeless people in Japan: Psychological characteristics and the need for psychological support

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Awareness of poverty and homelessness is increasing in Japan as it is worldwide. Although there has been much discussion about ways of supporting homeless people, little attention has been given to these supports from the point of view of psychology. The purpose of the present qualitative study was to describe support services to homeless people in Japan provided by a nonprofit organization (NPO) to which the researcher belongs, report the psychological characteristics of homeless people, and discuss the need to offer psychological support to them. The NPO was established in 1985 in Nagoya, one of the major cities in Japan, with the goal of helping poor people including the homeless by providing medical services and support for an independent life. The researcher has belonged to the NPO since 2008 and has engaged in consulting services as a volunteer once a week. In the study, the psychological characteristics

and symptoms of homeless people were surveyed based on interview and consultation records between April 2008 and March 2009. 511 clients used the services for a year, where 161 clients (31.5%) needed support for their financial needs and independent life, and 57 (11.2%) needed medical care. Interviews with the homeless revealed that they were ashamed of being homeless and distrusted others, which became an impediment to their acceptance of support from others and/or welfare benefits such as public assistance. It was also shown that homeless people have a high level of feelings of isolation, depression, and suicidal ideation. The study revealed the importance of psychological supports such as mental health care and psychological empowerment in relation to the quality of support services promoting the independent living of homeless people.

Keywords: *homelessness, Japan, poverty, psychological characteristics, psychological support*

How can we increase dedication in physicians from emergency departments? A proposal from Spanish hospitals

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The Dual Process Model (Schaufeli & Bakker, 2003) suggests that job demands are associated negatively with engagement. Physicians from emergency departments are exposed to high overload, less rest time, and have more difficulty finding substitutes for vacancies than other hospital departments. The aim of this paper was to analyze the dedication response of physicians' exposure to different job demands and produce an intervention proposal. The design study was cross-sectional and the sample was composed of 87 physicians from all public hospitals of Alicante Province (Spain). The mean age of participants was 40 years ($SD=7.8$) and 54.8% were male. Job-demands were evaluated by items ad hoc. Dedication was measured by UWES Scale (Schaufeli & Bakker, 2003) and descriptive analysis, ANOVA and t-test were carried out. Results showed medium dedication levels of

physicians ($M=2.94$; $SD=.73$) in accordance with UWES Manual. Physicians with more time to recover from work shifts showed higher levels of dedication than physicians with less time to recover ($F= 5.236$; $p=.007$). The same applied to those physicians who work in departments that quickly cover vacancies ($t=-2.64$; $p=.018$). Results show the relationship between job demands and dedication among physicians from emergency departments. Theoretical and practical implications of these results are discussed.

Keywords: *emergency departments, physicians, hospitals, dedication response, job demands*

How ethical leadership contributes to private enterprise success: Evidence from China

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While the importance of ethical leaders within organizations has been emphasized more recently, little attention has been given to the effectiveness of ethical leadership on external stakeholders. Previous research highlighted that inter-organizational relationships cannot be well understood without recognition of leaders' behavior, particularly for Chinese private enterprises whose leaders play a critical role in building reputation and guanxi networks. So this study responds to how ethical leaders work effectively in private enterprise success by providing a multi-level ethical leadership model. On the basis of social learning theory, this study applies multiple-case study method to examine three private enterprises in China (Vanke, Alibaba and Tencent). The influence of leaders' ethical behavior on various stakeholders is studied. Results show that ethical leadership influences stakeholders within organizations (for example, employees), as well as external stakeholders (for example, suppliers and customers) in the Chinese culture context. A multi-level ethical leadership model is created, which proposes that ethical leadership is not only useful within organizations, but also effective in dealing with external stakeholders. Ethical leadership can facilitate private enterprise success by providing ethical values and reputation to both internal and external stakeholders.

Keywords: *Organisational leadership, Ethical leadership, Inter-organizational relationships, Guanxi networks, Organizational reputation*

How feedback influences individual performance in interactive Simon tasks: The role of self-structure

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The standard Simon effect shows that responses are faster if they spatially correspond to the stimulus signaling them. The interactive Simon effect is a similar effect that occurs when the Simon tasks are shared by pairs of individuals. The present study aimed to examine the influence of feedback and self-structure on Simon effect. Participants (Peking University graduates) were randomly assigned to two conditions after fulfilling the measurement of self-structure. Participants in each condition completed the interactive Simon task with a confederate, during which participants would receive either positive or negative feedback on their performance. Results showed that participants' responses were faster with stimulus-response correspondence than with non-correspondence, and individuals with low independent self responded faster than individuals with high independent self. More important, a significant interaction indicated that the effect of feedback on reaction time differed among individuals with different self-structure. Overall, this study contributes to the understanding of the interactive Simon effect. The findings suggest that the influence of feedback is moderated by self-structure. Namely, individuals with low independent self respond faster in negative feedback conditions than in positive conditions; while in high independent self individuals, the effect reversed.

Keywords: *Simon tasks, feedback, performance, responses, self-structure*

How personality affects the perceived leadership behaviors in the Chinese culture: A multi-source perspective

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The present study aimed to integrate moral leadership into Quinn's (1988) Competing Values Framework, as moral leadership was of great salience in the Chinese literature. This study would also examine the relationship between personality and leadership behaviors in the Chinese work setting. A total of 152 senior executives in Hong Kong or Mainland China completed the Chinese Leader Roles Scale and the Cross-Cultural Personality Assessment Inventory (CPAI-2) in an online survey. Their 111 superiors and 334 subordinates provided ratings on executives' leadership performance as well. Exploratory Factor Analysis showed that moral behavior was a distinct component in Chinese leadership, aligned with the universal leadership dimensions in Quinn's model. Multi-source data revealed that two CPAI-2 scales – Leadership and Responsibility – were generally predictive of multiple leader roles in executive self ratings and subordinate ratings. Veraciousness, a culturally-relevant personality dimension, was effective in predicting perceived leadership from superiors. This study has developed a systematic measure of moral component in Chinese leadership, which appropriately reflects the core value of Confucian philosophy. Moreover, the predictive power of culturally-relevant personality scales on leader roles suggests that personality traits that are congruent with the culture help to elicit leadership behaviors that are prescribed for the environment. These findings have addressed the importance of using indigenous constructs in managerial assessment.

Keywords: moral leadership, competing values framework, Chinese, personality, management

How reading habits influence attentional blink

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Attentional Blink (AB) is when we present two targets and insert some distracters in-between, i.e. if the SOA are between 200ms to 500ms, then the detection of 2nd target (T2) will be backward influenced by 1st target (T1). When

SOA of T1 and T2 is very short, then the correct rate of T2 recall will become a U curve. Our studies based on the AB paradigm we want to know the Chinese user they have both vertical and horizontal reading and writing habit. We test if AB effect will also happen in upper/lower arranged visual field for the subject their mother language is Chinese. In the first experiment we presented the stimulus horizontally or vertically. Targets are the digits and distracters are English characters. In the second experiment we used the traditionally radical of Chinese characters as the distracters, and target is digits same as experiment 1. All the dependent variables are the correct rate of T1 and T2 response. Both experiments examine how the temporal and spatial relationship between two visual targets (T1, T2) will result to the AB deficit and Lag 1 sparing. We also examine the attention allocations of visual field of Chinese user. We found that when the stimuli were present horizontally, then no matter T1 and T2 at the same visual field or not, there are AB and Lag 1 sparing. When stimuli were present vertically, if T1 and T2 at the different visual field, then there is AB effect, but no Lag 1 sparing. This results illustrates the attentional zone could be oval-shaped, which means the horizontal attentional field is bigger than the vertical. In English users, there is a left visual field superior AB effect, and this is same as in Chinese version of our experiment. Beside we also got upper visual field superior AB effect. Since English reader has left to right reading habit and has the left visual field superior AB effect. And our experiments results found the Chinese reader have left and upper visual field superior AB effect. So we got the idea that attention engagement are influenced by the distracters of AB effect, are caused by the reading habits.

Keywords: attentional blink, China, reading habits

How work engagement relates with occupational stress and the purpose of working?

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Work Engagement is a positive, fulfilling, work-related state of mind that is characterized by

vigor, dedication, and absorption (Schaufeli, 2001). The aim of this study is to examine How Work Engagement relates with occupational stress, the purpose of working for workers. We made a set of questionnaires including NIOSH Generic Job Stress Questionnaire (the Japanese Version), Utrecht Work Engagement Scale (Japanese version, 9 items), 12 items about the purpose of working. We requested employees of 5 organizations (finance company, printing office, food company, car dealer, nursing care institution) for cooperation. We obtained replies from 710 employees (404 males 306 females, average age 38.8). Correlation between Work Engagement and the other variable were calculated. Results of analysis showed as follows: 1) Work Engagement has a negative correlation with all stress reactions (feeling anxiety, fatigue, depression, etc.); 2) job stressors and personal relations at workplace were negatively correlated with Work Engagement, and a rewarding job and cognitive vocation to the job were positively correlated with Work Engagement; 3) buffer factors and social support from the supervisor was positively correlated with Work Engagement; 4) purpose of working and working as a contribution to the company and society and working for improvement of ability were positively correlated with Work Engagement; and 5) the older group and married group showed higher Work Engagement scores, compared with the younger group and unmarried group, respectively. It was clarified that Work Engagement is related to personal relationships, social support, and other particular factors. It is considered that improving these factors may be the key for workers to work willingly. The results also indicate that working for positive purposes is important for workers. These results may contribute making strategies to improve worker's well-being.

Keywords: *Work engagement, Well-being, stressors, support, job stress*

Identification of WISC-III for the gifted children in Khartoum State

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This study aimed at investigating the identification of WISC-III for the gifted children

in Khartoum State, as well as to assess their full scale intelligence quotient (FSIQ) and to find out the difference between performance and verbal intelligence quotients (PIQ & VIQ). The researcher applied the WISC-III to all children (293) in gifted schools in Khartoum State. The number of males was 145 (49.5%) and females were 148 (50.5%), whose ages ranged from 8-13 years. All the pupils were from 4th grade and 5th grade. A descriptive approach was used. The study revealed that the highest intelligence score registered was 142. The overall average on the VIQ score was 110.85 and on the PIQ score, 117.80, while the FSIQ scores 117.63. The study's results revealed that no significant statistical differences were found between male and female participants but there was scatter found on arithmetic test (-3), digit span test (-3) and coding test (+3) on overall average for subtests. To conclude, gifted children obtained a higher degree of performance intelligence than verbal intelligence (POI + PSI > VCI + FDI). Finally, the study presents some recommendations and suggestions.

Keywords: *gifted children, intelligence, WISC-III*

Identity and Wellbeing: A Social Psychological Exploration from India

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The notion of religious identity, in a multicultural society of India, has implications for well being. The experience of well being is investigated in relation to people's mode of identity formation. The study involves people from four religious traditions, i.e., Hinduism, Islam, Christianity and Sikhism ($N= 200$). They were asked to distinguish their identities at the physical, social and spiritual levels, in addition, their past, present and estimated well being was determined. Multiple methods of assessment are employed to study identity and well-being. Results suggest that nature of identity shapes the experience of well-being. A strong identity provides a protective function. Implications for health policy and individual interventions are indicated.

Keywords: *religious identity, India, well-being*

Immigrant expectations and perceptions of New Zealand work-related practices

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The aim of this research was to investigate recent immigrants' reasons for moving to New Zealand and how they perceived work-based behaviours and attitudes in New Zealand. Understanding whether immigrants have a realistic view of New Zealand, and the work-related values and practices, is important for improving the retention of immigrants. Recent immigrants' reasons for moving to New Zealand and their levels of job satisfaction, work-family conflict and levels of workaholism were measured. Immigrants' beliefs about New Zealand society's attitudes to work and leisure were also measured. These were compared to a group of individuals who had only ever worked in New Zealand. Lifestyle choices were rated as the most influential motivation for moving to New Zealand, more so than work-related reasons. Overall, job satisfaction was high and work-family conflict was low, for participant groups. The two groups showed comparable levels of work enjoyment but those who had only worked in New Zealand showed higher levels of drive to work. Beliefs about the extent to which 3 work practices – a positive work-life balance, flexible working hours, being able to be in constant touch with the workplace – were valued by employers and by New Zealand society were related to workaholism related behaviours and to levels of job satisfaction and work-family conflict, for both participant groups. This research suggests that the image that is portrayed of New Zealand attracts individuals seeking a better lifestyle, and that immigrant' perceptions are indeed met, providing confidence for the retention of immigrants. The findings bode well for the process of acculturation of immigrant workers into New Zealand workplaces and New Zealand society more generally.

Keywords: *immigrants, work-related practices, New Zealand*

Implications of person and organization fit across organizational types, and its impact on organizational effectiveness

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The aim of this study was to investigate the differences among organizational types. Also, it was tested if the relationship between personal characteristics and organizational effectiveness variables would be moderated by collegial relations (an organizational environment factor), because it was thought that personal characteristics are reflected in the type of organization, as claimed by the attraction-selection-attrition framework (Schneider, 1987), and that person and organization (P-O) fit (Kristof, 1996) like congruence between personal characteristics and organizational environment would enhance organizational effectiveness. 70 employees from public, 86 from private, and 67 from hybrid organizations were surveyed to see if organizational characteristics would be reflected in employee characteristics variables such as personality (Costa & McCrae, 1992), intrinsic motivation (Amabile et al., 1994), perceived colleague relation (Pierce et al., 1990), job satisfaction (Scarpello & Campbell, 1983), organizational citizenship behavior (OCB; Organ, 1988), and turnover intention (Becker, 1992). The characteristics of the organization were reflected in levels of the personal characteristics measured. Private organization members reported the highest levels of extraversion, intrinsic motivation and turnover intention. But public organization members showed highest levels of agreeableness, and hybrid members showed highest levels of OCB and job satisfaction. These results reflect the fact that employees in public organizations face greater restrictions from rules and regulations, but private employees are likely to experience more freedom and competition. Also, In the case of South Korea, a higher level of job security and a higher level of pay offered by hybrid organizations may have a positive effect on job satisfaction. The results of a three-way interaction showed that the effect of collegial relation depends on the different types of organization, and significantly moderates the relationship between personal characteristic

factors and organizational effectiveness variables (job satisfaction, OCB and turnover intention). These results are interesting because there was evidence that P-O fit was related to organizational effectiveness and P-O fit would enhance organizational effectiveness, too. The results partially support the idea that the characteristics of the organization influence the behavior and the attitudes of the organization's members. Also, the results suggest that providing a positive atmosphere may increase P-O fit.

Keywords: *person-organization fit, organisational effectiveness, organizational characteristics, employee characteristics*

Implicit and explicit effect of subliminal mere exposure

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Recent research on attitude change has shown that implicit and explicit attitudes are influenced by different processes. According to the APE-Model (Gawronski & Bodenhausen, 2006) it is assumed that changes in associative knowledge structures should lead to changes in implicit attitudes, whereas changes in propositional knowledge should lead to changes in explicit attitudes. For example, in the case of evaluative conditioning on self-esteem, implicit measures showed changes but explicit measures did not. On the basis of these studies, we predicted that subliminal mere exposure effect (repeated exposure to a stimulus enhances its likability) would occur for implicit but not explicit measures (Experiment 1). In Experiment 2, we proposed that subliminal mere exposure effect would also occur for explicit measures through discussion in pairs of participants who were exposed to the same stimuli. Ten abstract paintings that received equally favorable ratings in a pretest were used as stimuli. As an implicit measure, we used the Affect Misattribution Procedure (Payne et al., 2005) designed to assess implicit likability for exposed stimuli and non-exposed stimuli. To measure explicit likability, a self-reported scale (dislike-like) was used. In Experiment 1, participants ($N=32$) were subliminally exposed to five of the ten paintings. Immediately afterward, the implicit and explicit

likability toward the exposed and non-exposed paintings were individually measured. In Experiment 2, the general procedure was identical to Experiment 1; the only exception being that pairs of participants ($N=60$; 30 pairs) who were exposed to the same paintings were asked, through discussion in pairs, to indicate how much they liked these paintings. The results of Experiment 1 revealed that significant effect was observed only for implicit measure. That is, exposed paintings were evaluated as more implicitly likable than the non-exposed ones. In Experiment 2, however, consistent with our predictions, significant effects were observed for not only implicit measure but also explicit measure. We demonstrated that subliminal mere exposure may influence implicit attitudes but did not affect explicit attitudes. Moreover, results in Experiment 2 suggest that explicit attitudes would also change through discussion in pairs that were exposed to the same stimuli.

Keywords: *implicit attitudes, explicit attitudes, subliminal mere exposure, stimuli*

Implicit attitudes toward regional diversity in the Ukraine

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The Ukraine has regional differences in historical, cultural and economic aspects. Political electoral technology in the Ukraine has used the idea of regional diversity as two poles of the Ukraine – East and West. It is sometimes used in a negative separating context. The main goal of our research was to evaluate youth implicit attitudes toward the regional diversity, identifying the necessity of focusing psychologists' attention. A new version of the Implicit Association Test (IAT) (Greenwald, Nosek, Banaji, 1998) was proposed for evaluating the regional diversity attitudes. Categories for East-West dimensions were the cities and towns of the regions. Categories for Positive-Negative dimensions were enthusiasm, sincerity, unity, greatness, independence, loyalty and opposites. The research included interviews and other direct methods. A sample of West, East and Central regions of the Ukraine was investigated ($n=300$). We confirmed some expected relationships, such as that the distance

of difference in youth regional diversity attitudes consist of the native region. But there were some abnormal tendencies of negative attitudes in the Central region. There was a discrepancy in the results of direct and implicit methods also. The finding allows us to propose special organized group discussions for changing the distance in a difficult case. We confirmed the possibility of using IAT for measuring attitudes toward regional diversity. The situation with attitudes toward regional diversity in the Ukraine needs psychologists' attention. Dynamic regional diversity attitudes are important indicators for efficacy and correctness of political electoral technology in the Central region of the Ukraine.

Keywords: *regional diversity, Ukraine, young people, implicit attitudes, implicit association test*

Implicit theories of domestic violence

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Implicit theories, or personal explanatory beliefs, held by Australians in relation to the cause and prevention of domestic violence were examined in this study. Implicit theories of domestic violence are important as they influence the adequacy and appropriateness of the help victims request; the functionality of public policy and laws enacted to manage the issue; and contribute to the development of social norms that serve to sanction or condone violence within families. Whilst beliefs associated with individual and contextual causes of domestic violence are empirically well documented, public perception of the importance and effectiveness of its cultural and social causes, and preventative strategies is less clear. A total of 281 participants' completed an online survey that rated 30 causal explanations and 24 prevention strategies of domestic violence. Principal component analysis identified individual, and to a lesser extent contextual and socio-cultural factors as important causes of domestic violence, whilst therapy, community intervention and education were identified as effective domestic violence preventative approaches. The findings are consistent with ecological or multi-factorial explanatory models

of domestic violence, however the level of endorsement of each factor was found to be somewhat dependent on the participants' age, gender and prior experiences of domestic violence. The results of this study suggest that Australians' are aware of the complexities associated with the aetiology of domestic violence, and that domestic violence prevention strategies targeting these causes will be generally well supported. Gender differences appear to be related to the theoretical orientations that underpin the causal attributions, therefore, preventative programs need to be targeted accordingly. The relationship between age and the level of endorsement of preventative strategies also suggests that programs that target younger generations may do well to advance a model of domestic violence that is reflective of its complexity. Finally, the implicit beliefs evidenced in this study imply that victims are held responsible, to some extent, for managing the violence in intimate relationships. Education and awareness campaigns that address the complex issues and barriers associated with leaving violent and abusive relationships are therefore imperative.

Keywords: *implicit theories, domestic violence, public policy, social norm*

Implicitness' of implicit theories of intelligence: The problem of measuring implicit theories

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Implicit theories of intelligence (ITI) have effects on motivation and adaptations (Dweck, 1999). However, ITI have been measured by paper and pencil questionnaires, which is a problematic method because explicit variables measured by paper and pencil questionnaires have the possibility of relation of social desirability. Therefore, the aim of this study was to examine the relationship of explicit variables of ITI and social desirability. The participants were 88 college students. The materials used were the Scales of Social Desirability (Tani, 2002; subscales: self-deception and impression-management); and the Scale of Implicit Theories of Intelligence (Fujii & Uebuchi, 2008a, 2008b).

Participants responded by group at college lesson times. The correlations of implicit theories of intelligence and self-deception ($r=.35$) and impression-management ($r=.29$) were significant. Explicit variables of ITI had relations of social desirability. However, Fujii & Uebuchi (2008a, 2008b) have found that implicit variables (measured by Implicit Associate Test (IAT)) of ITI were not related to social desirability. Therefore, ITI measuring by implicit method would be valid.

Keywords: *implicit theories of intelligence, motivation, adaptation, social desirability*

Impressions from point-light displays of dance expressions: Differences in dance experience of observers

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It is known that biological motion produced by point-light displays (Johansson, 1973) gives a good representation of walking (Cutting and Kozlowski, 1997; Dittrich et al., 1994), gender (Cutting and Kozlowski, 1977; Lamoth et al., 2006), facial expressions (Bassili, 1978), emotions (Clarke et al., 2005; Dittrich et al., 1996; Pollick, 2001), playing sports and their visual cues (Abernethy et al., 1993; Abernethy et al., 2001; Shim et al., 2005; Ward et al., 2002), and dance (Dittrich et al., 1996) with kinematic information. In information processing, we could not only identify motion, action, but also perceive or recognize impressions and sensitive images, but few studies have focussed on them. The purpose of this experiment was to measure how observers perceive emotional impressions from point-light displays. Dancers were instructed to express three emotions: joy, sadness, and anger, using their entire bodies but without using facial expressions. Each emotion was expressed for about 15 seconds, and repeated twice to avoid inadvertent improvisation. The dancers wore dark clothing and the 13 markers were attached to their bodies: the head, shoulders, elbows, wrists, thighs, knees, and toes. Each expression was capture using a 3D motion capture system (Motion Analysis Inc.) with 10 cameras and recorded by digital video camera. The dancers were then judged for the best and most

expressive movements of each emotional expression by themselves. Thus the appropriate expressions of the three emotions were selected for this experiment. Using these data of expressions, point-light displays were made with the 3D animation software MotionBuilder (Autodesk Inc.). Five dance experienced and seven dance inexperienced observers participated. The participants were requested to watch and rate how compatible each emotion was with each dance of point-light, and to evaluate impressions on a 5-point likert scale. These impressions were 7 items (happy, lonely, sharp, solemn, dynamic, flowing, and natural). The results showed that both experienced and inexperienced observers tend to identify each emotion that the dancers intended to express. Our findings indicate that particular impressions from point-light displays have differences in dance experience of observers.

Keywords: *dance, point-light displays, dance expressions, Kinematic information, emotions*

Impressions of sounds in rural nature area: Evaluations by college students in rural nature area

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We investigated evaluation of impressions of sounds in rural nature area. In a previous study university students in urban areas participated and rated their impressions of the sounds heard in rural nature area or their impressions of the landscapes they imagined for the sounds. Both ratings varied, but many found some of the sounds nostalgic and rated some of the landscapes they imagined as nostalgic. In the present study we examined whether college students in rural nature area rated impressions of the sounds similarly as the students in urban areas had done. 30 college students living in rural nature area participated in two experiments. First they heard the sounds in rural nature area and rated their impressions of them. Next they also heard the same sounds and rated their impressions of the landscapes they imagined for them. As a result, both ratings were not distinctive and the patterns of the

impressions were similar between the sounds and the related landscapes. Both of the impressions of the sounds in rural nature area and the impressions of the landscapes they imagined for the sounds were not the same between students in rural nature area and students in urban areas. This suggests that familiarity to a sound may weaken the impression of the sound as well as of the image of landscape created by the sounds.

Keywords: *impressions of sounds, rural, landscapes, familiarity*

Improving student wellbeing, academic performance, and group work skills using peer mentoring

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The first year university experience has been shown to contain unique challenges for students as they adjust to the self-directed nature of higher education. Further to transition, there is often the need to work collaboratively. This study evaluated the efficacy of a peer mentoring program embedded in tutorials in a first-year engineering course, by comparing peer mentors supporting group work with the same information provided by regular classroom tutors. Students ($n = 77$; 69 male, 8 female) were measured at the beginning and end of semester on group work self-efficacy, satisfaction with life, and feelings of depression, anxiety, and stress. Results revealed a 100% retention and pass rate in the peer tutored group compared to 96% in the control group. A significant difference was found between groups on group task grades when controlling for high school ENTER score. Only the peer mentored group showed significant improvements in group work efficacy across the semester, and had significantly higher satisfaction with life compared to the control group at the end of the semester. Although no differences were found between the groups in depression, anxiety and stress at the end of semester, peer mentored students' anxiety lowered across the semester. This research indicates peer mentoring designed around a specific assessment task may benefit students academically, and subsequently lower their

feelings of anxiety. Future research should investigate if and how a synthesis between the psychosocial and instrumental support functions of peer mentoring is possible.

Keywords: *student well-being, academic performance, group work skills, peer mentoring, anxiety*

Improving the provision of a culturally safe psychological service, within in an Urban Private Practice in NSW Australia

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The aim of the current study was to improve the provision of a culturally safe Psychological service, through increasing practitioner cultural competence through structured cultural mentoring. A pre post repeated measures survey within one private practice within an urban area of NSW was conducted. One Psychologist from the private practice completed the survey. The participant undertook a process of engaging a cultural mentor to provide the private practice with support and assistance to improve the provision of a culturally safe psychological service to an Australian cultural minority group i.e. Australian Aboriginal and Torres Strait Islander people. Following the engagement of the consultant the participant was supported to complete three activities, which included: cultural mentoring i.e. a structured cultural exchange process which aims to improve the cultural competence and understanding of the participant; experiential learning activities; and a structured process of identifying the target population and engaging with the key community within a culturally respectful manner. Following six months the participant repeated the survey. The Tracey Westerman "Cultural Competence Test" which is a tool that is designed to assess a respondents capacity to integrate culturally appropriate assessment, engagement and interventions skills into clinical practice. The tool is divided into four domains: knowledge, skills, beliefs/attitudes, resources and links and organizational influences. The results of the pre and post test results show an increase in cultural competence across all domains with the exception of the resources and

links domain which remained steady at 70%. The largest increase was recorded in the organisational influences domain (39% increase) and an equal increase of 10% was recorded across the knowledge, skills and beliefs and attitudes domains. This study supports the effectiveness of engaging cultural consultants to improve the cultural competence of Psychologists within a private practice setting. Through the provision of culturally safe Psychological services and supporting Psychologists to work within a cultural context, the professions of psychology and cultural mentors can work together to improve the health and wellbeing of Indigenous Australians. Initiatives, through the Australian Psychologists Association, State Psychology Registration Boards and Australian Universities, to strengthen the ethical and profession obligations to work in partnership with cultural mentors are urgently needed.

Keywords: culturally safe psychological service, cultural competence, structured cultural mentoring, private practice

Impulsivity is the most important predictor for non-suicidal self-injury among all borderline personality features

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Non-suicidal self-injury (NSSI) among adolescents has become one of the leading public health problems and is attracting more and more research attention these years. The phenomenology of NSSI and the underlying mechanism, however, are still unclear. The present study examined the prevalence of NSSI and the relationships between NSSI and various borderline personality disorder (BPD) features among Chinese community adolescents in Hong Kong. A number of 4,782 Chinese adolescents (68.5% girls, aged between 11 and 19 years) were surveyed twice in two consecutive years. They completed measures on NSSI and various BPD features. Results revealed that 15.0% of participants have engaged in NSSI in the past year, with considerable variations in the prevalence and frequency of different NSSI behaviors. Impulsivity was the most important predictors for NSSI. In the presence of

impulsivity, other BPD features would be unnecessary in predicting NSSI. Among the three types of impulsive behaviors, substance use contributed the largest amount of unique variance in NSSI and it was also the most powerful risk factor and protective factor for later engagement and discontinuance in NSSI. Implications for classification issues of NSSI in the diagnostic and statistical manual (DSM) system and treatment strategies were discussed.

Keywords: Non-Suicidal self-injury, borderline personality disorder, adolescence, impulsivity

Individual differences: multidimensional Bradley-Terry model using reversible jump Markov chain Monte Carlo algorithm

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The Bradley-Terry model has been widely and effectively used to rank stimuli from paired comparison data in sensory tests, sports data and certain psychological measurements. Existing approaches for paired comparison data analysis, however, have a number of limitations. First, among applied Bradley-Terry models in which multidimensionality is assumed, the effects of individual differences are not considered. Second, in these multidimensional Bradley-Terry models, the number of dimensions is generally evaluated only after analyzing several models with different dimensions separately, thus causing computational inconvenience. In this study, a multidimensional Bradley-Terry model is proposed, which considers the effects of individual differences. The proposed model allows estimation of parameters for both scale values of stimuli and individual differences in multidimensional space. A procedure of parameter estimation is presented that uses a reversible jump Markov chain Monte Carlo (RJMCMC) algorithm to estimate the optimal number of dimensions as well as associated parameters simultaneously. To assess the utility of the RJMCMC algorithm, the averages and standard deviations of the posterior probability for models with different dimensions over 50 different data sets are calculated under various conditions by the simulation studies. The simulations showed that

RJMCMC algorithm were effective and practical. Moreover, in the example using real data from sumo tournaments, a 2-dimensional model was optimal from both statistical and interpretative points of view. In this case, the scale values (strength of players) changed with time and using the time periods of tournaments as a stratification variable regarding individual differences enabled clear and accurate interpretation of the data. The proposed method provides a general framework for analyzing various types of paired comparison data. A number of approaches could potentially enhance the capabilities of the proposed model. One approach is extension of the model to polytomous data, since the Bradley-Terry model is generally restricted to binary data. Another approach is extending the model to consider the factors that affect judgments. These approaches are discussed in the conclusions more intensively.

Keywords: Multidimensional Bradley-Terry model, paired comparison data, individual differences, Reversible jump Markov chain Monte Carlo (RJMCMC) algorithm

Individual psychological characteristics of the propensity to take risks in people with different levels of affluence in terms of social instability

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The aims of this study were to compare the individual psychological characteristics of people of different income levels and their influence on the propensity to take risks, and to analyze the propensity to take risks in conditions of social instability. The tests utilised in this research were the scale of Marvin Zuckermann, the Ehlers-Schubert method, the Temperament Aizenk's method, statistical ANOVA, and LISREL-8PS. The research tasks were performed and the objectives achieved. Socio-philosophical analysis was conducted on individual psychological characteristics of the propensity to take risks in people with different income levels in terms of social instability. The program LISREL-8PS made it possible to create a theoretical model of psychological profile of the respondents. Respondents with low income were found to be more likely to take risks than the group with high

income. The study could serve as a platform for scientific discussions and has prospects for development (e.g. in cross-cultural direction).

Keywords: risk, propensity to take risks, social instability, individual psychological characteristics, income levels

Individual values, attitudes and driving behaviour

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The aim of the present study was to find whether attitudes towards aberrant driving moderate value-behaviour relations. Previous research has showed that values predict violations of traffic rules (Renge, Austers, & Muzikante, 2008). Iversen's (2004) longitudinal study showed that attitudes towards aberrant driving behaviour predict reckless driving in future. One of the attitudes' functions is to express values; therefore, we hypothesized that attitudes will moderate value-behaviour relations in driving situation. We explored: (i) values in relation to driving behaviour by regression analysis; and (ii) value-attitude-behaviour relations by using simple mediation analysis (SOBEL test for SPSS). 527 lay drivers (mean age 30 years, 54% male, mean annual mileage 23,210 km) participated in the study. Participants filled out a questionnaire containing the Portrait Value Questionnaire (Schwartz et al., 2001), Drivers Behaviour Questionnaire (Austers & Renge, 2007; Reason et. al., 1990), and Attitudes Toward Aberrant Driving Behaviour questionnaire (Iversen, 2004). Age and gender were entered at the first step into stepwise regression analysis, and ten values were entered at the second step. Values types of Achievement and Tradition significantly contributed to the model. Single mediator analysis showed that attitudes mediate values-behaviour relations. Particularly, attitudes towards aberrant driving behaviour mediated value-behaviour relations in case of Benevolence, Universalism, Security, Tradition, and Conformity values types. Results of current research show that values predict driving behaviour. All the values mentioned above have negative relations with attitudes toward aberrant driving and driving violations –

the higher values rating the more negative attitudes towards aberrant driving behaviour and less driving violations. Attitude change is one of the methods to strive with traffic violations, our findings point to a possibility of a better intervention method based on values, since values are more stable personality characteristics than attitudes.

Keywords: *attitudes, driving behaviour, values, aberrant driving, attitudes*

Influence of affect and companionship on impulse buying

CHEUNG, W.Y. (The Chinese University of Hong Kong)

The aim of this study was to investigate the effects of pre-shopping affect (both positive and negative) and companionship on impulse buying tendency. One hundred and seventy seven Hong Kong university students took part in a policy-capturing study. After being selected in a preliminary study, eight scenarios were used with four designed for studying positive affect and companionship and four designed to study negative affect and companionship. High reliability was found, suggesting that participants used a consistent policy for responding to all scenarios. The results of a manipulation check also indicated that participants projected themselves into all scenarios, which allowed for deeper processing of the stimuli. Only positive affect was found to be significantly associated with impulse buying tendencies, in which lower positive affect led to greater tendency to buy on impulse. This study found that lower positive affect could lead to greater impulse buying tendency and two possible explanations were given.

Keywords: *impulse buying, companionship, affect, university students, Hong Kong*

Influence of cognitive bias on young cyclists' road crossing intentions at non-signalized intersections

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Previous research suggested that even when cyclists possessing the right-of-way at non-signalized intersections noticed cars coming from cross roads, they tended to believe the drivers would give way. Such cyclists' biased judgments may lead to accidents. This study seeks to verify if young cyclists' unsafe road crossing intentions at non-signalized intersections are influenced by cognitive bias, using the Theory of Planned Behavior (TPB). One hundred and twenty-three university students completed a questionnaire about bicycle crossing behavior at potentially hazardous non-signalized intersections. Every situation was depicted differently by a scenario and a picture. Situations were designed with three factors: priority (cyclist moving on a major or minor road); distance (near or far car on the cross road); and psychological state (whether the cyclist is in a hurry or is calm). Only psychological state was a between-participant factor. Thus, questionnaires contained four situations. For each situation, participants rated TPB components (i.e., attitude, subjective norm, perceived behavioral control, and intention) and additional items (i.e., expecting cars to yield, self-serving bias, and unrealistic optimism) on a seven-point scale. Three additional items were averaged to create a cognitive bias variable. Three-way ANOVAs with repeated measures and all items as dependent variables demonstrated that the psychological state had neither a significant main effect nor an interaction. Therefore, the psychological state was collapsed, and four situations were reconstructed with the remaining factors. Hierarchical regression analyses with intention as the dependent variable revealed that adding cognitive bias as a predictor significantly increased the amount of variance explained in three out of four situations except for minor-far situation. Participants' unsafe crossing intentions were biased when crossing non-signalized intersections especially when possessing the right-of-way, which was consistent with the previous study. Thus, interventions should focus on how to lower cyclists' cognitive bias. The unique discovery of this study is that cognitive bias influences crossing intentions even if cyclists are on a minor road and the car is close. Although the mean score of crossing intention in this situation was low, the importance of considering cyclists'

cognitive bias was suggested to predict their unsafe intentions.

Keywords: *cycling, crossing intentions, cognitive bias, theory of planned behaviour*

Influence of cultural-value orientations and perceived parental expectations on career interest

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Even though career interest is often regarded as an intra-personal variable (that is, interest as a person-level variable), researchers have pointed out that career interest is often influenced by cultural as well as relational factors. Hence, this research study aimed to achieve two purposes. First, we aimed to examine the relationship between cultural-value orientation (traditionality and modernity) and career interest. Second, we wanted to examine the relationship between career interest and parental expectations, as family and parental expectations on career choices and goals are likely to influence the career interests and choices of students. Participants of this study were university students in Hong Kong, Beijing, and Wuhan. Participants completed a number of instruments, which were the Living Up to Parental Expectation Inventory (LPEI) (Wang & Heppner, 2002), a Career Interest Inventory (a Chinese language interest inventory based on Holland's theory of career interest), and the Multidimensional Scale of Chinese Individual Traditionality (MS-CIT) and Multidimensional Scale of Chinese Individual Modernity (MS-CIM) (Yang, 1996; Yang, 2003). The number of participants from Hong Kong, Beijing, and Wuhan was 643 (369 female and 274 male), 271 (152 female and 119 male), and 427 (175 female and 252 male), respectively. Since there were regional differences on the test scores (between Hong Kong and Beijing/Wuhan students), separate analyses were conducted for the two groups. For each group, six regression analyses were conducted using each of the Holland interest scores as dependent variables, and the Perceived Parental Expectation scores from the LPEI (personal maturity, academic achievement,

dating concerns) and the Traditionality and Modernity scores and gender as predictor variables. The results suggested that (a) for Chinese mainland students, Traditionality was significantly related to Investigative and Social interests, and Perceived Parental Expectation showed significant predicting effect on the two interests; (b) for Hong Kong students, Traditionality was significantly related to Social, Enterprising, and Conventional interests, and Perceived Parental Expectations were significantly related to Investigative, Social, and Enterprising interest; and (c) gender effect significantly contributes to the relationship between cultural-value orientation and career interests. The details of the analyses, and convergence and divergence of findings on the two student groups, as well as theoretical and practical implications, will be examined and discussed.

Keywords: *cultural-value orientations, parental expectations, career interest, relational factors, Chinese students*

Influence of empathic- affective reactions on interpersonal behaviors of Japanese junior high school students

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A new scale of empathic-affective reactions for Japanese junior high school students, based on 4 categories (positive or negative emotions X parallel or reactive outcome) was developed. The relationship between envy and empathic-affective reactions was then investigated in order to demonstrate the characteristics of the scale. Finally, the influence of empathic-affective reactions on prosocial and aggressive behaviors was examined. Junior high school students (n = 203) responded to the Empathic-Affective Reactions Scale, The Envy Scale, the Prosocial Behavior Scale, the Overt Aggressive Behaviors Scales and Rational Aggressive Behaviors Scales. Factor analysis of the Empathic-Affective Reactions Scale revealed 3 factors: Positive

empathy (positively parallel and reactive emotions), Negative sharing (negatively parallel emotions), and Sympathy (negatively reactive emotions). These subscales had high reliability. Partial correlation analysis revealed that envy was negatively correlated with Positive empathy ($r=-.18$) and positively correlated with Negative sharing ($r=.36$). Regression analysis of empathic-affective reactions to prosocial behaviors revealed significant effects of positive empathy ($B=.26$) and sympathy ($B=.35$). Also, regression analysis of overt aggressive behaviors revealed only the significant effects of positive empathy ($B=-.26$). Results suggest that positive empathy has the positive potential of promoting prosocial behaviors and restraining overt aggressive behaviors, whereas sympathy has the positive potential of promoting prosocial behaviors.

Keywords: *empathy, aggressive behaviour, prosocial behaviour, high school students, Japan*

Influence of lighting on perception of object color

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Energy saving and reliable lighting sources as the light-emitting diodes (LED) are rapidly developing. Implementations of LED depend on their subjective properties. Attractiveness of the same colored objects illuminated by two light sources, with the same correlated color temperature but different spectra, can be different. Sensitivity to changes of color under different lighting can be also different. We address the problem of influence of lighting upon color attractiveness and capability to discriminate color differences. Standard A, D65, D55 and LED light with the same correlated color temperature were used. The Munsell, Farnsworth Munsell 100 Hue Test samples and 28 two colors plates were used. It was found that attractiveness of colored plate under different lighting depends on their chroma. The changes in the capability to discriminate color

differences are explicitly observed for the older subjects in greenish-yellowish and blue regions.

Keywords: *lighting, perception of object color, color attractiveness, energy conservation, light-emitting diodes*

Influence of one's view on the past for orientation to growth and sense of fulfillment among undergraduates: Self-formation process from the view point of psychological time

ISHIKAWA, A. (Chuo University)

This study aimed to clarify the self-formation process from the view point of psychological time. Self-formation is considered a phenomenon of change or growth of self. Reviewing previous studies, it was suggested that the self-formation process consists of one's view on the past affects orientation to growth and how the latter affects sense of fulfillment. The first purpose of this study was to develop a scale to measure one's view on the past. The second purpose was to clarify the self-formation process by clarifying the influence of one's view on the past for orientation to growth and the influence of orientation to growth for sense of fulfillment. In survey1 we first categorized and organized "one's view on the past" based on free descriptions by 109 university students (average age 19.18 years, $SD=1.02$). It became clear that "one's view on the past" is comprised of elements related to "connection of psychological time", "attitude to the past", and "perception of the past". Secondly we created a list of 94 preliminary "one's view on the past" measurement items. In survey2 we requested 252 university students (average age 19.56 years, $SD=1.10$) to answer the questionnaire constructed from 3 scales using the 5-point rating scale: "one's view on the past", "orientation to growth", and "sense of fulfillment". The results of a questionnaire on survey2 were that factor analysis on "one's view on the past" yielded 5 subscales (connection of psychological time, positive attitude, negative attitude, practical attitude, and negative perception). Furthermore, factor analysis on "orientation growth" yielded 2 subscales (growth orientation and effort orientation). Structural equation modeling demonstrated the

validity of the above hypothetical causal relation between “connection of psychological time” and “growth orientation”, “positive attitude” and “growth orientation”, “positive attitude” and “effort orientation”, “practical attitude” and “effort orientation”. It also indicated that “negative perception” negatively influenced “sense of fulfillment”, but “orientation to growth” did not influence “sense of fulfillment”. These results support that “one’s view on the past” influences “orientation to growth” in the self-formation process.

Keywords: *self-formation, psychological time, fulfillment, orientation to growth, view on the past*

Influences of career as a nurse and status in a clinical unit on interpersonal stressors of Japanese hospital nurses

MATSUMOTO, T. (Osaka University), USUI, S. (Osaka University)

A major issue in Japanese hospitals is interpersonal stressors among nurses. In Japan, there have been many studies on nurse burnout. These studies have suggested that nurse burnout involves human relations. However, few studies have focused on interpersonal stressors among nurses. This study therefore examined influences of career as a nurse and status in a clinical unit on interpersonal stressors of Japanese hospital nurses. 624 nurses in Japan participated in the study. They completed a questionnaire about interpersonal stressors, number of years worked as a nurse (under four years, over four years but under seven years, over seven years but under fifteen years, or over fifteen years), and status in a clinical unit (supervisory nurses vs. nonsupervisory nurses). Items about interpersonal stressors were included to measure the frequency of stressors caused by human relations. Factor analysis revealed that interpersonal stressors among nurses consist of five factors: “disagreements with doctors,” “not understanding staff,” “errors they commit,” “negative behavior by doctors,” and “concealing real thoughts.” A one-way ANOVA with career as a nurse was conducted for each factor of interpersonal stressors. The result revealed that disagreements with doctors was significantly higher in the group with over four years but under seven years experience and

in the group with over seven years but under fifteen years experience than in the group with under four years experience. Furthermore, a one-way ANOVA with status in a clinical unit was conducted on each factor of interpersonal stressors. However, only the data of participants who worked as a nurse more than seven years was analyzed because all other participants except one were nonsupervisory nurses. The result of ANOVA revealed that “disagreements with doctors” and “not understanding staff” were significantly higher for supervisory nurses than for nonsupervisory nurses. This study found that “disagreements with doctors” increase among nurses who had worked fifteen years in Japanese hospitals. In addition, the study suggested that if they hold supervisory status, both “disagreements with doctors” and “not understanding staff” increase.

Keywords: *Japanese, interpersonal stressors, nurses, burnout*

Influences on youth gambling: Do past behaviour and impulsivity improve the predictive utility of the theory of planned behaviour?

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The present study used the theory of planned behaviour (TPB) to examine the behavioural decision-making dynamics, cognitive and social influences, and underlying beliefs of different categories of gamblers. The efficacy of the TPB in predicting gambling intentions and behaviour was evaluated together with the influence of past behaviour and impulsivity in an extended model. A prospective design with two waves of data collection, one month apart, was utilised. Participants were first year psychology students between the ages of 17 to 27 years (mean age = 19.94 years). At time 1 (T1), 143 participants completed an online questionnaire, with intention to gamble in the next month as the target behaviour. At time 2 (T2), 92 participants completed a follow-up online questionnaire, with frequency of gambling since T1 as the target behaviour. Results showed that attitude, subjective norm (SN), and perceived behavioural control (PBC), predicted intention to gamble. However, when past behaviour and impulsivity

were included in the extended model, PBC was no longer significant. Actual gambling behaviour at T2 was predicted by intention to gamble and past behaviour. Contrary to the TPB, PBC did not contribute to the prediction of actual gambling behaviour. As expected, impulsivity moderated the intention-behaviour relationship, and differences in attitudinal beliefs were found between non-problem, at-risk, and problem gamblers. The results highlighted the importance of past behaviour and impulsivity as additional constructs in the TPB, and identified specific attitudinal beliefs to be targeted in strategies to effect changes in problematic gambling behaviour.

Keywords: *theory of planned behaviour, gambling, past behaviour, impulsivity*

Information processing speed in older adults

CASTELLANI, M. (La Trobe University)

This study was designed to explore the multifactorial nature of visual processing speed. It was based on the conceptual framework that components of processing speed may be specific to the sequential stages of input, central and output processing. The influence of age, memory and fluid intelligence on each of the components was also examined. A sample of 92 normal adults ranging from 61 to 89 years was assessed on a battery of visual tasks. Input processing speed was measured by two high speed computerised visual tasks, central processing speed was measured by a visuospatial working memory task and an inhibition task, and output processing speed by handwriting tasks. Factor analysis revealed three, relatively uncorrelated, constructs of perceptual speed, mental rotation speed and psychomotor speed. The perceptual speed factor and the motor speed factor were predicted by a general processing speed measure but not age, fluid intelligence or memory. The mental rotation (central) processing speed factor was predicted by fluid intelligence only. Future studies may explore a wider variety of information processing speed measures and different sensory (input and output) modalities for further classification. These classifications could prove useful in

neuropsychological assessment, where specific processing modalities may be compromised.

Keywords: *visual processing speed, stages of input, age, memory, fluid intelligence*

Insecure adult attachment and perception of facial emotions

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This study aimed to empirically examine the effect of insecure attachment on the perception of facial emotions. Individuals with high anxiety or avoidance attachment may be more vigilant to the cues relevant to negative information in the appraisal process of availability and responsiveness of their significant others. Thus, we hypothesized that they may be more likely to accurately perceive negative facial emotions. One hundred and thirty undergraduate students completed the Revised-Adult Attachment Scale and computerized Diagnostic Analysis of Nonverbal Accuracy 2-Taiwan version (DANVA2-TW). Results revealed that, participants with high anxiety attachment exhibited less accurate perception overall for facial emotions, especially fear emotions, whereas participants with high avoidance attachment displayed a negative bias toward anger emotions. In addition, participants with high anxiety attachment tended to perceive neutral facial emotions more as sad emotions and less as happy emotions, whereas participants with high avoidance attachment tended to perceive neutral facial emotions as anger emotions. The findings suggest that high anxiety and avoidance attachment may lead to negative emotions. The mechanism of insecure attachment and perception of facial emotions will be discussed.

Keywords: *insecure attachment, facial emotion, anxiety, avoidance*

Integrating special needs students in regular classrooms: Beneficial or detrimental? An attempt of a data based answer from a systemic approach

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Participation of special needs students in regular classrooms is already part of current common sense. Decades ago, the respective desiderates appeared in agreements or declarations of various countries and organisations (e.g. Salamanca Declaration, 1994; Convention on Rights of Persons with Disabilities, 2006). However, because of complexity and multiple determination of the issue, neither the terms addressed nor the concepts elaborated nor the educational systems implemented share common ground (cf. Haeberlin, Bless, Moser & Klaghofer, 2003; Eurydice, 2007). Therefore, only systemic approaches combined with data-driven evaluations can serve as a sound basis for applicable research (cf e.g. Kronig, 2007; Rollet, 2008). In this poster a Swiss project (of Sonderpaedagogisches Zentrum Bachtelen [SZB] at Grenchen, Canton Soleure) evaluating conditions for integrations of special need students in regular classrooms are described. Distinctive for its theoretical basis is an understanding of "integration" as a bi-polar concept (with "separation" and "inclusion" at its ends) which takes part of a systemic approach referring to properties of the individual concerned (e.g. special needs, developmental stage) as well as the surrounding conditions of the social (familiar) and the educational system. Within this approach (incorporating education of special-needs pre-schoolers, students and apprentices in the comprehensive, family based accompaniment of social work education) beneficial and detrimental effects of different degrees of integration are to be identified. For this purpose quantitative and qualitative data are collected at different levels (e.g. figures of the educational system at canton, municipality, school) and in different perspectives (e.g. appreciations of principals, teachers and parents; interviews, tests and related diagnostics of special needs and of regular children, pupils and apprentices; structured observations of classroom-behaviour) and entered into multi-level configuration analyses (e.g. hierarchical least-squares, frequency configuration) in order to identify patterns that allow designs of educational systems apt to assist special needs persons with appropriate integrative

arrangements and interventions. Depending on the progress of the project which began in autumn 2009, samples and design as well as results regarding characteristics of each level (e.g. concomitance between financial and personal equipment and integrative approach of the school) and perspective (e.g. teachers' and apprentices' appreciation of insertion into the working process) are presented and submitted to first conclusive interpretations (e.g. about features of the family based and/or subsidiary accompaniment of integrative interventions). Recommendations for milestones of the cantonal frame and the institutional and interventional changes in the SZB and associated institutions are given.

Keywords: *special needs, educational systems, integration*

Intellectual entrepreneurship: The combination of thought and action

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Writers who have studied and discussed entrepreneurship have offered different definitions and types for it. Hisrich (1991) defines entrepreneurship as a process of creating new things through spending time and effort, and accepting financial, psychological and social risks in order to obtain financial resources, personal satisfaction and independence. There are three types of entrepreneurship including personal, organizational and social. But there is forth type that has been neglected and is called intellectual entrepreneurship. Most common classes of entrepreneurship are based on their context and environment rather than their nature and essence. In fact, intellectual entrepreneurship represents a combination of idea and action. So, the purpose of this article is to review intellectual entrepreneurship dimensions and characteristics. The method of this research is descriptive-analytical, and data will be collected through library sources and electronic data bases. A complete process of entrepreneurship requires risk- taking, creativity and grace. Having all these traits requires system thinking and divergent thoughts. Intellectual entrepreneurship is not a combination of two thoughts of entrepreneurship and rationality

that can approach idea and action. Intellectual entrepreneurship covers techniques and indices that can equip entrepreneurship.

Keywords: *intellectual entrepreneurship, entrepreneurship, system thinking*

Interrelation of some physiological indicators and psychological features of students in the conditions of examination stress

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This work is directed to studying the interrelation between a blood pressure change and frequency of warm reductions of students during the examination and some psychological data. The secondary indicator – an Index of Robinson (IR) was used for a total estimation of reaction to a stressful situation of the cardiovascular system. The diagnostics of psychological characteristics of examinees was spent by means of the Colour Test of Ljusher before the beginning of the examination. Measurement of examinees in the conditions of examination stress of physiological indicators has allowed allocation of four groups of students conditionally. The first group was characterised by physiological indicators corresponding to norm (IR = 9000-10000). The stress is not revealed. Physiological changes in the second group of students (IR = 10000-12500) were an indicator of "moderate stress". Changes of physiological indicators from 14500 and more characterised the fourth group as examinees "the frank stress". The correlation of the physiological indicators of students in the conditions of examination stress by the psychological characteristics on section of the test of Ljusher "Stress sources", has shown the following: If we classify the negative factors of the specified section under four ranges (A,B,C,D), we can characterize the groups of the examinees by the correlations that are given below. The first group on section "Stress Sources" is presented by factors of ranges A and B. The second group is presented by ranges B and C. In the third group – B, C and D. The fourth group where the stress is the most expressed,

has all ranges with the maximum growth of factors in a range of B. In this group the tendency to nervously-somatic pressure and aspiration to recognition is shown. The allocated four groups on a parity of physiological indicators and personal characteristics are interesting from the position of studying the deep reasons of the revealed parities.

Keywords: *Index of Robinson, stress, exam stress, physiological changes, physiological indicators*

Intervention engagement in a mental or physical exercise program predicts episodic memory performance in older women

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Positive effects of mental and physical activities on cognitive performance in old age have been demonstrated. To further understand this relationship, we studied the association between the degree of an individual's intervention engagement and the degree of its cognitive benefit. Older healthy women ($N=161$, $y=70-93$) participated in a randomly assigned 6-month exercise or computer course (thrice weekly, each 90-minutes). To predict episodic memory performance at post-testing, pre-measured episodic memory (FCSRT) and two different measures of adherence were used: number of courses attended and time-spent on this intervention engagement. Time-spent was calculated in hours the participants spent on all attended courses adding the actual time for getting to and from the sites where the courses were held. Average course attendance was 69% in the exercise group and 85% in the computer group. In the exercise condition, baseline measurement ($\beta = .66$) and course attendance ($\beta = .17$) were predictive of high test scores ($p < .001$, $R^2 = .45$). A positive interaction emerged between course attendance and baseline measure ($\beta = .15$, $p < .10$, $R^2 = .47$). In the computer course, the baseline measure was equally strong ($\beta = .63$). Here the amount of time-spent contributed to the prediction ($\beta = .17$, $p < .10$), but not course attendance

itself. The interaction term indicated that women who performed low at baseline but spent a large amount of time outperformed those with the same low baseline but less time-spent ($\beta = -.17, p = .053, R^2 = .46$). The effects of an intervention engagement on episodic memory depend on pre-intervention cognitive status and time-spent on this engagement, whereas sheer number of courses attended is of lesser importance. Those women with a low baseline performance have a higher potential for episodic memory gains, if they engage in a challenging activity. Travelling activity to the courses provides a beneficial effect which might be explained by unspecific stimulating effects occurring during travel time.

Keywords: *episodic memory, cognitive performance, physical activity, older people, interventions*

Investigation affective, political attitudes and economic dependency in men to their spouse: An attitude assessment study

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The purpose of this study was to assess the attitudes of men living in Shahrekord (a city in Iran) about their Affective, Political and Economic Dependency towards their spouse. 130 married men participated in this study by completing the questionnaire developed and validated by the researchers. The data was analyzed through ANOVA. The results indicated that men expressed that they had dependency towards their spouse in affective and economic aspects, but their dependency in political attitude was not significant. Thus to conclude, men may hold political attitudes that have no relationship to the perspectives of their spouse.

Keywords: *married men, spouse, affective dependency, political dependency, economic dependency*

Investigation of psychosocial predictors of internalised homonegativity in two

age cohorts of lesbian and bisexual women

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Internalised homonegativity (IH) is examined in the present study utilising a minority stress framework. Two possible psychosocial predictors of IH, perfectionism and lesbian/gay community attachment are investigated as is the relationship between IH and the mental health outcomes of depression, anxiety and stress. This study attempts to further illuminate the discussion of IH by investigating differences between two distal age cohorts of lesbian and bisexual women; under 30 years and 40 years and over. 128 lesbian and bisexual identified women aged 19 to 65 years completed an online survey. IH scores for the two cohorts were analysed using a one-way between groups analysis of covariance (ANCOVA), with perfectionism and lesbian/gay community attachment as the covariates. Three factorial between groups analysis of variance (ANOVA) were employed to examine the relationship between IH and the mental health outcomes of depression, anxiety and stress. The age cohorts differed significantly on IH with the younger cohort having significantly higher mean IH scores than the older cohort. Results indicated that only sense of community significantly affected IH scores. Results also showed that high levels of IH were significantly related to depression, anxiety and stress regardless of age. This study provides evidence for the association between age cohort and IH, as well as verifying the link between lesbian/gay community attachment and IH and the association between IH and the mental health outcomes of depression, anxiety and stress. This study suggests that IH is an important psychological process in the health of lesbian and bisexual women that is impacted upon by social factors. Although IH appears to be stronger in the younger cohort, high IH levels prove to be harmful no matter what the age, indicating the significant role IH plays in the life of lesbian and bisexual women and the need for IH to be addressed at both the individual and social level.

Keywords: *internalised homonegativity, perfectionism, lesbian women, bisexual, depression*

Investigation of the cognitive process of evaluating student learning outcomes by means of the university evaluation reports

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There is an increasing demand for measuring student learning outcomes to improve the quality of education in higher education. A fundamental question is what is the important evidence that reflects the effect of the increase and decrease of student learning outcomes. In the psychological field, psychometric approaches to develop objective tests to measure the ability of student learning outcomes have suggested some standardized tests. These are useful methods to measure learning outcomes based on the students' achievement. In our approach, we attempted to measure learning outcomes based on the effectiveness of institutional performance, not on the student achievement itself. Effectiveness of institutional performance is usually measured in documents (text, numerical data) and site visit analysis by evaluators (academics, experts, presidents). Therefore, we analyzed the cognitive process of evaluator's judgment of rating the universities by means of the university evaluation data. The aim of this study was to clarify the key evidence for learning outcomes focusing the attention on the evaluator's judgment process of effectiveness of institutional performance. As a data, we extracted the part of the evaluation reports of the National University Corporation Evaluation (reported in 2009, Japan), which concerns the description of the learning outcomes. The data consisted of the results of evaluation judged by 4 point scale and the text data which shows the reason they used for the judgments for 357 departments of 87 universities. The relationship between the categorical judgment toward the departments and the variety of description on the text were analyzed by experts. The result showed that two types of information were used for the judgment of learning outcomes on the text. One is the quantitative information expressed by indicators

(e.g. graduation rate, employment rate, the number of awards). The other is qualitative information expressed by institutes' practices. From the quantitative information, differential thresholds of each indicator and the frequency of the appearance were measured. This revealed the evaluator's tendency for categorizing the effectiveness of institutional performance. Some useful evidences for measuring the learning outcomes were suggested analyzing the evaluator's cognitive process. This result is applicable to university evaluation.

Keywords: evaluation, student learning, university, quality of higher education, Institutional performance

Investigation of the relationship between emotional intelligence and social adjustment and academic achievement of guidance school students in Tehran, Iran 2008

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The aim of this study was to investigate the relationship between Emotional Intelligence, Social Adjustment, and Educational Progress, as well as the difference between female students' educational progress and male students' educational progress in guidance school. To study the hypotheses, the sample consisted of 300 students, including 150 boys and 150 girls, selected through cluster sampling. Our data consisted of the Emotional Intelligence questionnaire of 33-questions, by Siberia Shearing, and Rotter's Internal-External Locus of Control Questionnaire (30-questions), which ask questions about student behavior and personal information. The statistical methods used for data analysis were the Pearson Correlation and the independent t-test. According to the results, all of the hypotheses were certified. The main findings are as follows. There is relationship between emotional intelligence and students' social adjustment; emotional intelligence and students' educational progress; and students' social adjustment and students' educational progress. Furthermore, there is a difference between female students' educational progress and male students' educational progress. The results show the importance of emotion

intelligence, and social adjustment for education progress. The results of this study as well as many other studies in Iran and other countries, are important for parents; many scholars; and those in charge of the country's education (as well as those in other countries).

Keywords: *emotional intelligence, social adjustment, educational progress, gender, guidance school*

Investigation of the relationship between self-esteem and views of society in university students

MINEO, N. (Chuo University)

This study aimed to clarify the relationship between self-esteem and views of society in adolescence. Reviewing previous studies, it is suggested that environmental perception and self-consciousness interact with each other. The first purpose of this study was to clarify the characteristic views of society by university students. The second purpose was to clarify the relationship between self-esteem and views of society in university students. In survey 1, we categorized and organized views of society based on free descriptions by 111 students (average age=19.50, $SD=1.25$). In survey 2, we requested 312 students (average age=20.05, $SD=1.45$) to answer the questionnaire constructed from 4 scales: views of society (5-point rating scale), image of society (Semantic Differential method, 7-point rating scale), social cognition (as above) and self-esteem (5-point rating scale). In grouping the free descriptions 12 categories were identified: "whole society", "meritocracy", "economy and life", "politics", "peace", "culture", "media", "human relations", "people", "self and society", "method for evaluating society", and "unclassified item". The results of questionnaire survey 2 factor analysis on views of society yielded 4 subscales – "negative evaluation to society", "positive evaluation to society", "selfish people", and "guarantee that rewards effort". Factor analysis on self-esteem yielded 2 subscales – "sense of self-approval" and "sense of self-inadequacy". Cluster analysis of standardized scores on the 2 subscales of self-esteem identified 4 types of self-attitude – arrogant group (high "sense of self-approval" and low "sense of self-

inadequacy"), self-affirmative group (both high), equivocal group (both low), and self-abnegating group (low "sense of self-approval" and high "sense of self-inadequacy"). Four groups were compared using one-way ANOVA on 4 subscales of views of society. As a result, the main effects of group were significant on all subscales. The results of multiple comparisons showed arrogant group with significantly higher scores on "negative evaluation to society" than the other groups, and significantly higher scores on "selfish people" than self-affirmative group and equivocal group. The self-affirmative group showed significantly higher scores on "positive evaluation to society" and "guarantee that rewards effort" than the other groups. The results indicate that a more affirmative attitude to self leads to a more positive view of society.

Keywords: *self-esteem, views of society, university students, self-consciousness, environmental perception*

Is apathy a kind of laziness? A case study using ecological momentary assessment of a Japanese university student

OSANAI, Y. (Taisho University)

In general, we have interpreted apathy as a lazy feeling. According to the perceived apathy theory, however, domain-specific apathy (DSA) is an experience that demotivates our important activities (Osanai, 2009). The aim of this study was to find out what kind of activities apathetic participants wanted to do. This is a case study based on the Ecological Momentary Assessment. In this paper, I focused on a male university student. I gave thorough instructions to him before starting the research. I directed him to carry the questionnaire at all times and to fill out the questionnaire when he felt apathetic. In this paper, I chose the following question as an object for analysis. "If your motivation increases, what do you want to do? In addition, is it an important activity for you?" He filled out the questionnaire 11 times during the research period (March – August, 2008). Ten of these times he spoke about his studies at university. For instance, "I'd like to study more seriously. It is important for my future." There was one response about clearing his mind, which was "First of all, I want to feel refreshed. Then, I want

to motivate myself. I think it is important for my future." Thus, in his case, what he wanted to do when he was experiencing apathy was to study. We can picture his state of mind as "I should probably study but I don't want to." This apathy can be classified as DSA. At the same time, we can learn that the apathy that he perceived was not a feeling related to laziness. At least in his case, we might be able to consider the apathy as a kind of obstacle. In conclusion, I think we should pay more attention to DSA so that we might have the possibility to help their symptoms.

Keywords: *domain-specific apathy (dsa), laziness, male, university, case study*

Is it possible to forgive a murderer?

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Transgressions, especially traumatic ones such as the murder of a loved one, can have deep psychological and physical effects on a person. Following such a transgression, engaging in forgiveness is associated with positive well-being (Enright, Rique, & Coyle, 2000). Given that many believe certain acts, such as murder, to be unforgivable, this could render the victim in a never-ending negative state. The aim of this study was to assess, using Enright's (2001) widely accepted four-stage model of forgiveness, whether or not it is possible for someone to forgive murder; an act classified by many as unforgivable. An extensive interview was conducted with a woman claiming to have fully forgiven her husband's murderers. Following the interview, her answers were coded and compared with the steps outlined in Enright's (2001) model of forgiveness. Enright's (2001) first stage (Uncovering) requires victims to acknowledge their anger. In this particular murder case, anger was not an emotion experienced by the victim. However, she did need to acknowledge and experience other negative feelings: fear, loss and grief. Enright's second stage (Decision) requires the victim to make a conscious, deliberate decision to forgive. In this case, forgiveness was not a conscious decision, but rather something she immediately felt in her heart, and knew must be done.

Enright's third stage (Work) was fully applicable to this murder case. Empathy, understanding, and compassion, all core elements of this stage, were pivotal in this woman's experience of forgiveness. Enright's fourth stage (Discovery) was also fully applicable to this woman's experience. This stage involves the victim moving on from the transgression and experiencing a life change as a result. Through forgiving her husband's killers, this woman experienced a profound change in her worldview and since then, has made a career of working with offenders and lecturing nationally and internationally about the value of forgiveness. Using Enright's (2001) model, this case study suggests that it is possible to forgive a murderer. Although the first and second were not present, at least not in the way described by Enright (2001), they could be considered present if Enright's (2001) model addressed a broader spectrum of negative emotions (not just anger), and if it acknowledged that for some, forgiveness may be a spontaneous decision. Enright's third and fourth phases were fully present in this particular forgiveness process.

Keywords: *well-being, forgiveness, offenders, victims of crime, world-view*

Is it possible to guarantee quality of service and physicians' job wellbeing in emergency departments?

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A quality accreditation department is a management strategy increasingly common in hospitals to guarantee a quality service to citizens. However, to have certain quality indicators could reduce wellbeing of physicians due to the imposition of working procedures. The aim of this paper was to analyze physician dedication from emergency departments based on the presence of different quality indicators. The design study was cross-sectional, with a sample composed of 87 physicians from public hospitals of Alicante Province (Spain). The mean age was 40 years ($SD= 7.8$), and most of the participants were locums (36.9%) and civil

servants (25%). The quality indicators of departments were assessed by check-list and dedication response was measured by UWES scale (Schaufeli & Bakker, 2003). Descriptive analyses and t-tests were carried out. Results showed medium dedication levels of physicians ($M=2.94$; $SD=.73$). Physicians who are working in a department that has a defined mission, vision and objective, showed high levels of dedication ($t=-1.98$; $p=.04$). However, for departments with a system to self-evaluate work results, physicians show less dedication ($t=1.9$; $p=.04$). Furthermore, results showed that when a patient is assigned to a physician, the physician shows less dedication ($t=3.2$; $p=.00$). Results suggest a relationship between quality indicators and dedication response. Discussion suggests that some quality indicators could be considered as a job demands, and practical implications are discussed.

Keywords: *quality of service, physicians, emergency departments, quality indicators, job wellbeing*

Islamic view of nature and values: Development of scientific thought

FARUQI, Y. (Flinders University)

This paper discusses the basic tenets of Islam and the Islamic view of nature that were influential in the development of science in the so-called 'Golden Age of Islam'. Furthermore, it presents a discussion regarding the role that Muslim scholars played in the development of scientific thinking in the Middle Ages. They were inspired by the Islamic view of nature that is, mankind had a duty to 'study nature in order to discover God and to use nature for the benefit of mankind'. It argues that the Muslims were not just the preservers of the ancient and Greek knowledge, but that they contributed original works to the different fields of science. This knowledge was transferred to Western Europe and subsequently played an important role in revitalizing a climate of learning and exploration in Europe, leading to the Renaissance in the sixteenth and seventeenth centuries. These findings have been the catalyst for present day Muslim scholars, who have emphasized the importance of Islamic science, as the means of understanding Western science. There is also a

strong body of opinion within researchers of Islamic science that the abandonment of Islamic values and the rapid adoption of Western science and technologies have led to conflict in social, educational and scientific fields in Islamic countries. The article examines how these two views can be reconciled in order to build bridges between modern science and Islamic science.

Keywords: *Islam, scientific knowledge, Islamic science, middle ages*

It's not easy to be good parents: Role obligations of parents in Chinese families

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This study used an "obligation-based" perspective taken by children to explore role obligations of parents in Chinese families. According to Huang (1989), filial piety is the most important value or moral virtue in Confucian societies. Huang (2004) and Chen (2005) proposed that vertical goals were highly valued and represented social expectation and role obligation. The Chinese also put more emphasis on face than Westerners. Furthermore, King and Myers (1977) used "moral face" and "social face" to explain the concepts of face and "mianzi". We hypothesized that, on academic event, when parents in the stories took forced intervention, the perception of obligation-fulfilling rated by children was higher than mild intervention. In contrast, on moral event, when parents took mild intervention, the perception of obligation-fulfilling was higher than forced intervention. Participants were recruited from Taipei Municipal University of Education. There were 60 participants completing the questionnaires, with an average age of 20 years. A self-developed questionnaire was used to evaluate whether the parents in the stories fulfilled their role obligations. It was a 2 (academic or moral event) \times 2 (mild or forced intervention) between-subject factorial design. Participants had to indicate how much they agreed with the statements on a 6-point Likert-type scale. The main effect of parent-child conflict events was significantly different (M academic $>$ M moral), however the main effect of intervention was not significantly different. The interaction showed

that, on academic event, the effect of intervention was significantly different (M forced > M mind), but not on moral event. The results showed that pursuing vertical goals was rated as more likely to fulfill parents' obligation from children's perspectives. After all, it is the most important parental obligation to help their children achieve vertical goals.

Keywords: *parents, children, role obligation, moral face, social face*

Japanese life-patterns: Career development and work/family/leisure balance

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This study was designed to examine the differences in the influences of the satisfactions with work, family, and leisure on the perceived happiness among three levels of career development. 1770 participants responded to a questionnaire survey. Survey items were Career Development Scale (15 items, 5-point scale), Work, Family, and Leisure Satisfaction (each 1 item, 5-point scale), and Perceived Happiness (2 items, 5-point scale). In order to compare the models of relationships among the levels of Career Development, path analysis using structural equation modeling (simultaneous analysis of multiple groups) was conducted. The results showed that Perceived Happiness was mainly affected by the Family Satisfaction. In addition, it was also found that the higher the level of Career Development was, the more strongly the Work Satisfaction influenced the Perceived Happiness. From the results, it was suggested that the importance of taking career development into consideration in discussing the work-life balance.

Keywords: *satisfaction, perceived happiness, career development, work-life balance*

Knowledge, attitudes and perceptions of secondary school learners in selected South African schools towards HIV and AIDS

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In Sub-Saharan Africa, HIV/AIDS has reached epidemic proportions and is considered to be the leading cause of death. In light of this sad picture, it is important to put in place measures to prevent the spread of the epidemic. Such preventive measures will need to be supported by research that would shed light on HIV/AIDS. The aim of the present study was to assess the level of knowledge, attitudes, and perception of secondary school learners towards HIV/AIDS. The adapted version of the Human Science Research Councils' KAP Survey questionnaire was administered to Grade 10 to 12 learners in two secondary schools in Vhembe district, in Limpopo Province (South Africa). The systematic probability sampling process was followed. In each school, participants were selected randomly, using the school register. The majority of the participants (71%) were found to be aged between 14 to 18 - an age category that is expected to be in Grades 10 to 12 in South African schools. The study found that the two main sources of HIV/AIDS information were radio and television, with the internet, magazines and newspapers being less popular sources of information. Regarding knowledge about HIV/AIDS, the majority of the participants considered sharing injection needles with a HIV positive person and unprotected sex to be the two main sources of HIV transmission. In terms of attitudes towards HIV/AIDS, the responses were found to be mixed. Though most participants' perception of HIV/AIDS was positive, there were considerably large numbers of participants who seemed to have misconceptions about this viral condition. Based on these results, it is recommended that government sponsored HIV/AIDS awareness campaigns like Khomanani National Government Campaign, Soul City, Soul Buddyz, Love life, Gazlam, TshaTsha and Takalani Sesame should be continued.

Keywords: *HIV, AIDS perceptions, HIV, information sources, African epidemic*

Language syndromes in childhood in consequence of lesion of the brain structure and in consequence of dysfunction of cerebral regions

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Rapid and complete rehabilitation of the verbal communication in aphasia in childhood in consequence of lesion of the brain structure is thought to be the brain plasticity phenomenon. At the same time in some forms of aphasia and in case of Landau-Kleffner-Syndrome (LKS), contrary to established opinion about the greatest plasticity of brain in early childhood, the prognosis of the disease can be poor and the language communication stays undeveloped. The aim is to expose the dependence of the involution of aphasia in childhood on its etiology and on the nature of disorder. Aphasias in childhood described in literature can be divided into the following groups: Aphasias in consequence of structural brain injury, LKS, a combination of the syndromes mentioned above and the description of aphasia corresponds with LKS diagnostic criteria, but the authors call it "aphasia in childhood", "Wernicke aphasia", "sensory aphasia." Aphasias in childhood as a consequence of structural brain injury and LKS differ in course, symptomatology and outcome as well as in the correlation of the age of the onset and the prognosis for the disease. In aphasia as a result of structural brain injury, the prognosis is better in cases of injury in early childhood, on the contrary in cases of LKS the prognosis is better when the onset is in the school age. The two types of language disorders in childhood (in consequence of lesion of structure and in consequence of dysfunction of cerebral regions) are at the same time identical and different in their characteristics. The symptoms of the fall-out are identical: both destruction and dysfunction of the definite cerebral region lead to the similar manifestation which is connected with the specificity of functioning of the corresponding cerebral region. But the course of disease, the possibility of compensation and the outcome of organic and dysfunctional language syndromes are different. Each having their own logic in development.

Keywords: *aphasia, brain plasticity phenomenon, Landau-Kleffner-Syndrome, verbal communication*

Lay people's beliefs on how to psychologically cope with a disaster

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A fairly extensive body of literature now exists on mental health literacy (lay people's knowledge and beliefs about mental disorders which aid their recognition, management or prevention), but that literature is mainly focused on disorders such as depression and schizophrenia. Very little research has been done on post-traumatic stress disorder and, especially, on how to psychologically overcome a disaster or a similar traumatic event. The aim of this study was to examine lay people's beliefs about the usefulness of different behaviors to cope with a disaster. A sample of 576 Spanish adults (52.6% females; age range 18-85 years; mean age = 38.5 years) completed a questionnaire and rated the perceived efficacy of 28 different behaviors for overcoming a disaster. The questionnaire was derived from a content analysis of salient literature, especially self-help guides covering such topics as disasters, trauma or post-traumatic stress disorder. The coping behaviors perceived as more useful were those focused on seeking social support, doing relaxing-enjoyable activities, accepting the situation as a challenge, and replacing negative thoughts with ones that promote good mood. Coping behaviors not recommended by self-help guides (e.g., withdrawing from family and friends; thinking about the "why") were also rated as less useful by participants, but some coping behaviors recommended by self-help guides (e.g., finding out about the impact of trauma and what to expect) were underrated. ANOVAs and t-tests revealed some sex and age differences on the perceived efficacy of coping behaviors. Spanish lay people have beliefs on how to overcome a disaster and its consequences that, in general, are coherent with those proposed by professionals. However, misconceptions about the usefulness of some coping behaviors still prevail among the Spanish general public. Future

self-help guides and educational materials aimed at the general public should concentrate their efforts on those misconceptions.

Keywords: disasters, mental health literature, post-traumatic stress disorder, lay people's beliefs, coping strategies

Lay people's knowledge about the psychological consequences of a disaster

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Research on mental health literacy (lay people's knowledge and beliefs about mental disorders which aid their recognition, management or prevention) has made considerable progress over the past 15-20 years, but it has been mainly focused on depression and schizophrenia, and other mental disorders have been neglected. The aim of this study was to examine lay people's knowledge about the psychological consequences of a disaster, especially about post-traumatic stress disorder (PTSD) symptoms. A sample of 601 Spanish adults (56% females; age range 18-88 years; mean age 37.8 years) completed a three-part questionnaire and rated with what frequency PTSD and other psychopathological symptoms, as well as some positive psychological reactions, might appear after a disaster in mild-moderated injured victims, relatives and friends of deceased victims, and general people living in the area where the disaster occurred. Participants rated that, after a disaster, PTSD symptoms falling into the general clusters of re-experiencing and arousal, symptoms of other anxiety disorders, and posttraumatic growth experiences are more frequent in injured victims than PTSD symptoms falling into the cluster of avoidance (except for avoidance of thinking about the trauma, avoidance of reminders of the event, and psychogenic amnesia) and depressive symptoms. This pattern of ratings was different for the affected general population or the relatives and friends of deceased victims (e.g., depressive symptoms were rated as equally or more frequent than PTSD symptoms in relatives-friends). Spanish lay people are reasonably knowledgeable about the psychological

consequences of a disaster. However, misconceptions about some PTSD and depressive symptoms still prevail among the Spanish general public. Future educational materials aimed at the general public should concentrate their efforts on those misconceptions.

Keywords: disasters, psychological consequences, lay people's knowledge, mental health literature, post-traumatic stress disorder

Lay theories of depression in Japan: Analysis on answer data of a knowledge sharing community site

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We investigated the lay theories of depression among Japanese. People have formed their naive theories based on their direct and/or indirect experiences on mental illnesses such as depression. These naive theories include the causes, characteristics, and treatments of mental illnesses. We predicted these lay theories may be expressed through different kinds of communication media such as the Internet. Thus, we examined the contents of an online knowledge sharing community site to extract these lay theories. We analyzed the log data of one of the most popular knowledge sharing community sites in Japan, Yahoo! Chie-bukuro ('Yahoo! Answers' in English) that were provided by Yahoo Japan Corporation to the National Institute of Informatics. Users of this site post various kinds of questions and/or post the answers to these questions. Out of over three million questions posted from 2004 to 2005, we selected 3866 questions which included the word "depression". In addition, we coded and selected the questions which referred to the characteristics of depression, such as "what is depression" (Characteristics)? and the questions that referred to the diagnosis of depression such as "Is it depression" (Diagnosis)? Then, we examined the contents of answers to these questions using text mining software. Out of the questions that gained over ten answers, highly-frequent questions are about coping with symptoms, image of depression, negative

reaction from others, and the characteristics of depression. Some answers were posted by a person who has experienced depression. As for the Diagnosis questions, the words expressing depression co-occurred with the words "oneself", "human", "hospital", "symptoms", "psychic treatment internal medicine". Cluster analysis indicated clusters about symptoms, disease, consultation, and background. As for Characteristic questions, the words expressing depression co-occurred with the words "human", "oneself", "symptoms", "disease", "medicine". Cluster analysis indicated clusters about symptoms, vulnerability, and background. In a knowledge sharing community site, many questions about depression were posted and gained many answers from many different kinds of people based on their direct and indirect experience. Knowledge sharing community sites may play a role not only as information sharing media but also as self-help groups.

Keywords: *self-help, depression, community, mental illness, Japan*

Leader's color preference and subordinate's perception of leadership style: The moderating role of gender differences

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Subordinate's perception of leadership style has important practical implications in modern organizations. Researchers have been exploring many factors that could impact on it. This study aimed to examine the relationship between leader's color preference (black or white) and subordinate's perception of leadership style, and the moderating effect of subordinate's gender. Two hundred and fifty-three participants from 6 organizations were randomly assigned to two groups. Participants in each group read a simple description of a fictitious leader with the same traits (such as intelligent, diligent, deft, etc.) and the leader's color preference of either black or white for each respective group. After this, participants were required to imagine the leader's characteristics and then rate the leader on the 15-item Paternalistic Leadership Scale, which included dimensions of authoritarianism,

benevolence, and morality. Results showed that leader's color preference did not show a significant effect on subordinate's perception of leadership style. However, the interaction between color preference and the subjects' gender is significant in two dimensions of leadership styles. For benevolence, male subjects rated the leader higher on this dimension when the leader liked white ($t = -2.794, p < .01$), while female subjects' judgments were not affected by color preference of the fictitious leader ($t = .895, p > .30$). For morality, male subjects' judgments were not affected by color preference of the fictitious leader ($t = -1.349, p > .15$), whereas female subjects judged the black-preference leader higher in morality ($t = 2.084, p < .05$). For subjects' rating on the leader's authoritarian, the interaction between subject's gender and the leader's color preference fell short of significance ($F = .098, p > .10$). Based on the above results, color preference of the leader was found to be a factor for the subordinate's perception of leadership style, whereas gender differences played a moderating role in two of the three dimensions of leadership style: benevolence and morality. The relationship between leader's color preference and subordinate's perception of leadership style differs among subjects with different gender.

Keywords: *leadership, leadership style, subordinates, colour preference, gender*

Leadership and safety behaviours in nuclear power plants: A structural equation model

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The aim of the present study was to determine how leader behaviours influence employee safety behaviours. From the Empowering Leadership model (Arnold et al., 2000) to conceptualize leadership and determine the specific mechanism by means of which leaders influence safety behaviours, two important factors (safety culture and team safety climate) have been included to help us hypothesize a safety model. The proposed model tested the

following hypotheses: 1) leader behaviours will influence employee safety behaviours by means of safety climate; 2) safety culture will be a modulator in the relationship between leadership and team safety climate; 3) safety culture will predict team safety climate; and 4) safety culture will predict employee safety behaviours. Our sample was composed of 566 workers from a nuclear power plant. The four variables were assessed using four questionnaires which measured leadership, team safety climate, safety culture, and safety behaviours. Four confirmatory factor analyses conducted with Lisrel 8.8 (Jöreskog & Sörbom, 2006) supported the one-factor structure in each questionnaire. With the purpose of providing our hypotheses with empirical support and to test the proposed model, a structural equation analysis based on Lisrel 8.8 was performed. All coefficients in the tested model were statistically significant ($p < .01$) and the four hypotheses were confirmed. The goodness of fit indices values provided evidence that the proposed model was empirically supported ($\chi^2=4.36$, $df=2$, $p < .01$; RMSEA=.053; CFI=1.00; NNFI=.99; AGFI=.97). When strong safety culture exists, both empowering leaders and non-empowering leaders are more likely to create a team safety climate than if safety culture is weak. Better safety results are obtained when safety culture is combined with empowering leadership. Empowering leaders in organizations with a strong safety culture will contribute to a more developed team safety climate and, as such, to a higher number of safety behaviours.

Keywords: nuclear power plants, leadership, safety, safety, structural equation model

Leadership and value congruency

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The aim of this study was to test the influence of value congruency between leader and company on value-based aspects of the leadership behaviour, such as the communication of values. Since there are more and more companies defining their own values, there is an urgent need to investigate the influence of these values on the behaviour of the company's leaders. The

hypothesis was that value congruency would not have an affect on transactional leadership behaviour but would influence transformational, ethical and authentic leadership behaviour. A good fit between the values of the company and those of the leader was assumed to go along with an augmented extension of transformational, ethical and authentic leadership behaviour. Data was collected in an institution for elderly and disabled people. Leadership behaviour of 35 leaders was evaluated by at least one direct employee. The leaders completed a questionnaire about their personal values which were subsequently analyzed in relation to congruency with the company's values. The collected data disproved the hypothesis. Value congruency was unrelated to transformational, ethical and authentic leadership behaviour. However, in post hoc analyses, significant correlations between leadership behaviour and single types of values were found. For example transformational leadership correlates with the value type "achievement". Another post hoc analysis confirmed the interrelation between value congruency and affective commitment that has been previously reported in the literature. Leaders are able to lead in a transformational, ethical and authentic way even if their personal values are not in congruence with the official values of the company. Therefore, companies can teach their leaders to communicate the values the company stands for. Following this study there was no need to assess the leaders' personal values for personnel selection and development. However future research should investigate whether the congruency of values has an impact on leaders' well-being.

Keywords: leadership, value congruence, company, leadership behaviour, values

Learn yoga to improve mental poise

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The aim of this electronic poster is to highlight the significance of yoga for improving mental poise and fitness. It will also focus on the various yogic strategies through which one can improve one's mental poise. To achieve the above aim,

the poster will depict various Yogic techniques of Ashtang Yog which can improve our mental poise. Asanas, Pranayamas and various Shudhi Kriyas will specially be high-lightened to show the practical implications of these Yogic practices. It is anticipated that through this virtual presentation of different techniques of Yoga, people will learn how to perform these Yogic exercises which improves mental poise. Yoga, which is an ancient art of India and practiced for thousands years by Saints and Sages now has become a way of life. In this stressful and strenuous modernize life Yoga, if practiced daily, can become a way to improve not only physical health but also mental health.

Keywords: *yoga, mental poise, fitness, stress, mental health*

Learning from others and self: Reflection on experiences of success and failure

FUJIMURA, M. (Fukuoka Jo Gakuin University)

How do individuals learn to perform achievement tasks? By observing others or from their own experiences. This study investigated the extent to which individuals observe and evaluate the outcomes (success vs. failure) of the actors (others vs. self). In a questionnaire survey conducted for this study, undergraduate female students ($N=121$) were asked to list two tasks that they intended to learn: one that they were highly interested in and one for which they had a low level of interest. Two versions of the questionnaire (high-interest tasks vs. low-interest tasks) were used, and the participants were instructed to evaluate their experiences (instances of other's success, other's failure, own success, and own failure). Further, we assessed their responses, observations, and reflections using a 2 (outcome: success vs. failure) \times 2 (actor: others vs. self) within-subjects factorial design. The result showed that the participants observed the high-interest task higher than the low-interest task. Further, a 2 (outcome) \times 2 (actor) ANOVA on the reflections was conducted separately for both tasks. The analyses for both tasks revealed that there was no significant main effect and significant one-way interaction between the outcome and the actor (high-interest tasks: $F(1,120)=92.70$, $p <$

.001; low-interest tasks: $F(1,120)=52.91$, $p <$.001). The simple-effects tests revealed that the participants evaluated other's success higher than their own success, they focused on their own failure more than other's failure, and they equally evaluated their own failure and other's success for both the tasks. These results suggest that with regard to performing both high- and low-interest tasks, individuals learn from others as well as from their own experiences. The investigation of the effect of reflection on self-efficacy and motivation for learning tasks remains an important issue for future research.

Keywords: *success, failure, achievement tasks, learning tasks, reflection*

Linking career theories in counseling psychology to volunteerism

MICHALOS, S. (Cleveland State University)

Within counseling psychology, the study of careers and vocational interests has extensively been explored. The extant literature focuses on the interplay between prominent career theories and a whole slew of other factors including career choices for women, different ethnicities, age groups, and the disenfranchised. Of course, the literature is not limited to only these variables, but there is a distinct lack of literature and research on how career theories are linked to volunteerism. The purpose of this review is to examine the extent to which career theories are linked and connected to volunteerism in America. Of the numerous career theories that aid in explaining career development Holland, Super, and Lent will be described. The content of this electronic poster will explore the theoretical links between prominent career theories and volunteerism. There will not be a method or results section. Future research studies should be conducted to validate what areas of volunteering match career interests. In addition, researching career constructs in terms of volunteering can further validate the theoretical link between career and volunteerism. The reader will be able to articulate the connections between "good," well-meaning individuals and volunteerism and the benefits volunteering provides. In addition, potential research studies will be discussed to

further validate the link between career theories and volunteering, as well as, the large-scale benefits that volunteerism provides.

Keywords: *counselling psychology, volunteerism, America, career development*

Longitudinal twin study comparisons between high ability reading and low ability reading groups: Preschool through Grade 2

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The study addressed the question of whether Low Ability (LA) reading looks genetically and environmentally more like High Ability (HA) reading or normal range. It was hypothesized, heritability of LA reading will be lower than HA reading as shared environment will be a bigger factor at the low end of the continuum and genes a bigger factor at the high end. This was a genetically sensitive longitudinal study of same-sex twins from preschool through grade 2 (max $n=993$) from the US, Australia and Scandinavia. Two sets of probands were selected, 1 SD or 1.5 SD above or below the sample mean. Standard print knowledge, reading and spelling tests administered. Scores were standardised and behavioural genetic analysis carried out. Analyses indicated genetic influence; strong (.51 to .82) from kindergarten through grade 2 and modest in preschool (.26) for the complete sample (preschool $n=993$; kindergarten $n=938$; grade 1 $n=876$; grade 2 $n=827$). The shared environmental influence; strong in preschool (.56), modest in kindergarten (.30) and small in grades 1 and 2 (.07 and .03 respectively). Analyses of the extreme groups of readers at both ends of the spectrum showed lower genetic influence for the LA group compared to the HA group for each year level and a higher or equal shared environmental influence for the LA group compared to the HA group for each year level. This study, which provides a first time examination of the full range of reading abilities in the same sample, suggests there is substantial shared environmental influence for the LA group that is not seen in the normal range or for the HA group by grade 1. Shared environmental factors may be preventing the expression of the good genes so children who are not at genetic

risk of becoming poor readers are failing to learn to read and appear in the LA grouping. These children are likely to respond well to intervention and reach grade level outcomes. The children who fail to reach grade level outcomes with the same intervention may have bad genes supported by an impoverished literary home environment. This group probably needs more intense and longer intervention programs.

Keywords: *reading, high ability reading group, genetic influence, shared environmental influence, interventions*

Looking for an ideal boss - employees' vision in different cultural contexts

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The objective of this research (in a cross-cultural prospective) is to explore the perceptions of employees in great detail concerning what they recognize to be the ideal leader. The sample consists of a group of 600 employees, working in 42 European companies in various sectors (industry, distribution, energy, finance, service and food). The survey instrument is an on-line questionnaire (126 items) on Leadership-style Grid feedback 360° (Blake and Mouton - Managerial Grid Model). The main focus is on employee's ideal leadership style, with comparisons in three different cultural contexts (Italy, Germany and Czech Republic). By using the non-parametrical method, Kruskal Wallis, we noticed significant differences in all analyzed profiles. Post hoc analysis ($p_{\text{global}} = 0.01/3 = 0.003$; $p_{\text{global}} = 0.05/3 = 0.017$; Bonferroni's correction) highlights that Italian employees distinguish themselves from Germans and Czechs on 9.1 style ($mr(I) = 68.32$, $mr(D) = 44.23$, $mr(CZ) = 41.50$) and from Czechs in Opportunistic style (OPP; $mr(I) = 58.40$, $mr(CZ) = 45.93$) and 1.1 style ($mr(I) = 58.63$, $mr(CZ) = 44.53$), Germans from Czechs in 1.9 style ($mr(D) = 56.87$, $mr(CZ) = 37.37$) and 5.5 style ($mr(D) = 40.06$, $mr(CZ) = 58.34$) and Germans differentiate from Italians in 9.9 style ($mr(I) = 36.97$, $mr(D) = 61.81$). In addition, Germans differentiate from Czechs and Italians in the Paternalistic style (PAT; $mr(I) = 57.67$, $mr(D) = 31.81$, $mr(CZ) = 63.04$). Lastly, Italian employees

describe their ideal leader to present a marked orientation to results with an inclination to the opportunistic style, whereas German employees describe their ideal leader to be able to balance result-orientation with relation-orientation and, in general, be less paternalistic than the Italian and Czech ideals.

Keywords: *ideal leader, employee perceptions, managerial grid model, leadership orientation, paternalistic leadership*

Magnetic stimulation affects the visual spatial remapping mechanism in the brain

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The present study aims to determine the relationship between the spatial remapping mechanism and the moving directions of saccadic eye movement, as well as the brain regions in charge of the remapping system, using Transcranial Magnetic Stimulation (TMS) and the eye tracker. The study was a within-subject design, with three independent variables: saccade direction (left to right, right to left, top down, and bottom up); time from saccade onset (within 200ms and others), and TMS (real TMS or sham-TMS). The participants' task was to trace the dots on the screen and orally report the position of a bright green probe. At the same time we used the eye tracker to record the relative time between the probe onset and the saccade onset time. Real TMS and sham-TMS were discharged randomly in three brain regions, FEF, LIP, and V5, in the cerebral cortex. The dependent variable was the magnitude of mislocalization, i.e. the difference between the apparent position and the real position, in visual degree. The results showed that the largest magnitude of mislocalization was found for the direction of bottom up, compared with others. Furthermore, it was significant that the effect of TMS interfered with the magnitude of mislocalization when applied on the brain regions.

Keywords: *magnetic stimulation, visual spatial remapping, brain, saccadic eye movement*

Making of a medical professional: The role of resident training

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Medical practices involve complex technical, legal and social systems. Long periods of residency training are thus required before a beginning doctor can practice medicine independently. During residency training, a beginning doctor practices medicine under close supervision of senior doctors. This kind of supervised learning is essential to assist the smooth transformation of a beginning doctor to a competent medical professional. This study aimed to investigate the role of residency training in the development of a competent medical professional and to propose a model of professional development in medicine. Twenty attending doctors (senior, 11; junior, 9) were interviewed about their learning experiences during residency training. Senior and junior attendings' responses were analyzed to extract similarities and differences regarding their views on the role of residency training on practicing medicine as a professional. Consensus and differences between senior and junior attendings' views on the role of residency training suggest that beginning doctors do not have the competence to practice medicine independently. Medical practice requires not only medical knowledge, but also knowledge of the environment which supports medical practice and knowledge about the patients and their social milieu. Moreover, medical profession requires not only medical competences, but also the attitude, awareness and commitment to the life-long learning and the deep reflection upon the meaning of the profession. Senior doctors play a significant role in mentoring the resident doctor's development into a responsible medical professional. Medical education is not complete upon the graduation from the medical school. The making of a doctor requires long and extensive clinical practices during which senior doctors must help educate their juniors to become a competent medical professional. Medicine places a very high standard for the performance quality of its practitioner, the

proposed model of professional development can be readily generalized to other professions.

Keywords: *professional development, medication, residency training*

Management aptitude and its influencing factors: A case study of two private enterprise founders and their top management teams

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The aim of this poster was to investigate the management aptitude of the founders and their top management teams of private enterprises in China. Biodata interviews and questionnaires were utilised. Firstly, two investigated founders not only possessed the common traits of entrepreneurship including self-confidence, dominance and administrative skills, contingent, enterprising and hard-working, but also personal trait of tackling interpersonal difficulties. Secondly, family and education background, some key events of life experience as well as personal values and business philosophy impacted on the formation and development of the founders' management aptitude respectively. Thirdly, the formation and development of Top Management Team's management aptitude was mainly affected by the founder's personal characteristics, also closely linked with the needs of the industry characteristics. There are certain commonly shared psychological characteristics of top managers under the current Chinese cultural background.

Keywords: *management, China, entrepreneurship, psychological characteristics, personal values*

Measurement equivalence of the 15-item version of the Workaholism Battery across workers from New Zealand and Taiwan

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The phenomenon of workaholism is worldwide and prompts the need to examine whether measures of workaholism developed in the U.S. can be applied in other countries. The Workaholism Battery developed by Spence and Robbins (1992) has been used to measure workaholism in different countries and merits research attention on its construct equivalence across different cultural settings. We collected data from full-time employees in New Zealand (N = 320) and in Taiwan (N = 1226). Consistent with the existent empirical studies that examined the factor structure of the Workaholism Battery using the original 25-item scale, both samples were also not able to replicate the workaholic triad proposed by Spence and Robbins (1992). Therefore, we examined the measurement equivalence of the shortened 15-item version of the Workaholism Battery proposed by Huang, Hu, and Wu (in press). Confirmatory factor analyses were used to examine the construct validity of the scale within each sample and the measurement equivalence across the two samples. Cluster analysis was used to examine whether different types of workaholics can be formed within each sample. Results of single-group confirmatory factor analyses provided support for the convergent and discriminant validity of the 15-item Workaholism Battery within each sample. Results of multi-group confirmatory factor analyses suggested that configural invariance, partial metric invariance, and partial scalar invariance were established. Furthermore, different types of workaholics can be differentiated based on their scores on the 15-item Workaholism Battery. Based on the above results, both samples perceived workaholism as a three-factor concept, different types of workaholics can be identified by the 15-item Workaholism Battery, and cross-cultural comparisons of latent means is feasible. Implications for future workaholism research and managerial practice are discussed.

Keywords: *workaholism, cross-cultural, construct validity, managerial practice*

Measuring self-perceived employability of Chinese college graduates

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Employability is a critical requirement for college graduates to obtain career success. The primary objective of this study was to develop a reliable and valid instrument for measuring self-perceived employability of graduates in Chinese colleges. Based on interview (19 graduates), open-ended investigation (310 college students), enterprise discussion (18 human resources managers), and counseling of experts (12 college vocational advisers), the study made a survey about factors which influence college students successful employment. An employability questionnaire for college graduate students was constructed according to the survey. Exploratory Factor Analysis (EFA) (a sample of 550 graduates) and Confirmatory Factor Analysis (CFA) (a sample of 978 graduates) were performed, and the relationships between employability with other measures were examined. EFA found that the self-perceived employability of Chinese college graduates consists of 4 dimensions: personal trait, vocational ability, practice experience and job-search methods. The scale has a satisfactory reliability (internal reliability: $\alpha = .964$, retest reliability is 0.690) and a satisfactory validity (CFA: $\chi^2/df = 3.221$, GFI=.870, AGFI =.856, IFI =.907, TLI =.902, CFI = .907, RMSEA =0.048). The correlation between employability and job-search self-efficacy is .682. These findings support that the four-factor-model is valid; the scale can reliably measure the self-perceived employability of Chinese college graduates.

Keywords: *employability, college graduates, career success, job search, Chinese*

Memory impairment in Parkinson's Disease

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Parkinson's disease (PD) is a neurodegenerative disorder characterized by motor and cognitive impairments. In relation to cognitive impairments, memory deficits are frequently reported. The nature of this memory dysfunction is not known yet. PD has been related to a

pattern of impairment on memory task associated with executive dysfunction. Recent findings, however, suggest that PD patients exhibit deficits due to a specific memory dysfunction. The aim of our research is to provide clear evidence that memory process are not intact in PD. We evaluated 20 patients with PD without dementia and 15 participants from the general population matched for age and educational level. To study the executive implication in memory deficits, we analyzed the performance in tasks of free recall, cued recall and recognition, and in tasks with high and low cognitive demands. A profile analysis revealed that patients with Parkinson's disease exhibited: 1) deficits in free recall tasks that did not improve significantly when external cues were provided or when recall was requested by recognition, and 2) deficits in tasks with high cognitive demands that did not significantly improve when those demands were reduced. Memory deficit in PD cannot be reduced to a failure in the executive function but are due to a specific process deficit.

Keywords: *Parkinson's disease, cognitive impairment, memory impairments, executive dysfunction, free recall tasks*

Men charged with domestic abuse: Forensic contrast study

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The Courts of Violence against Women look for the assessment of men charged with domestic abuse in parallel with the psychological evaluation of female victims. The following are included among the forensic criteria taken into account in the assessment of men charged with domestic abuse: self-esteem, anxiety, personality, distorted thoughts, habitual violent behaviour in situations of domestic abuse, relationships, communication, criminal and psychopathological records, consumption of toxic substances, psychological treatments, jealousy, aggressive behaviour (verbal and physical), irritability, negativity, hostility, lying, resentment, impulsivity, anger, irrational beliefs

about women, danger, history of violent behaviour, empathy, etc. In our study, we wished to bring to forensic psychological assessment other variables that have been demonstrated to have valid content and discriminant significance. We used 22 variables of personality (ATRAMIC) and 4 variables of self-esteem (CAE). The sample comprised 102 males, of which 39 were in the control group (social skills workshop), 32 in the clinical group and 31 in the forensic population (charged with domestic abuse against their partners). We wished to explore whether there were differences between the groups (clinical, forensic, and control) in the variables or criteria described; and identify predictive factors using discriminant analysis. Results showed the following; (1) Using the discriminant function, 81% of the cases in the control group and the men charged with domestic abuse group were correctly classified. The variables with the highest discriminant power were: Fear of Rejection of Criticism, Extreme Caution, Transparency, Hypercontrol, Guilt and Empathy; (2) in the control and clinical groups, the discriminant function correctly classified 78% of cases. The variables with the highest discriminant power were: Failure to make Adjustments when Lying, Selective Privacy, and of the Self-Esteem Questionnaire (CAE), the variable "I-self". Furthermore, (3) in the clinical group, and men charged with domestic abuse against their partners group, the discriminant function correctly classified 87% of cases. The variables with the highest discriminant power were: Failure to make Adjustments when Lying, Self-Deception, Self-Control when Lying, No Honesty or Admission that they had Lied, Mistrust, Insecurity, Hypercontrol, Control, Self-Criticism, Being Coherent and Lack of Sensitivity. To conclude, sufficient differences were found to support a sensitive model for differentiation using the ATRAMIC and CAE instruments, based on the samples used in this study.

Keywords: domestic abuse, forensics, discriminant factors, males

Mental illness stigma and contact: An integrated threat theory approach

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Mental illness stigma can decrease the quality of life for sufferers. It is therefore important to explore factors which contribute to stigma and to examine methods for reducing stigma. One method that has previously been successful in decreasing stigma and prejudice is providing positive contact with people with a mental illness. This study aims to explore the role of contact and to determine if the Integrated Threat Theory of prejudice (ITT; Stephan & Stephan, 2000) could be applied to an understanding of mental illness stigma. The participants of this study consisted of 222 psychology students (167 females, 57 males) studying at the University of Canberra. Participants completed self-report questionnaires relating to contact, threat, and stigma before and after participating in a mental illness education program. As hypothesised, there was a negative relationship between contact and the four threats (realistic threat, symbolic threat, intergroup anxiety, and negative stereotypes) which make up ITT. Moreover, each of the four threats and stigma had a significant positive relationship. A hierarchical regression analysis found that the four threats explained a significant proportion of the variance in stigma above that which was explained by age, gender, quality and quantity of contact. The study also aimed to explore if the positive contact provided by a mental illness education program would result in reduced stigma and perceived threat. Although stigma levels decreased after receiving the contact, this difference was only marginally non-significant. However the intervention resulted in significantly lower levels of symbolic threat, intergroup anxiety and negative stereotypes. The results of this study provide support for applying social psychological models of prejudice to understanding the stigma and prejudice associated with mental illness. The results also provide new information which may help in the fight to increase quality of life for people suffering from a mental illness.

Keywords: mental illness stigma, integrated threat theory, quality of life, prejudice, mental illness

Meta-stereotype and its effects: Based on analysis of different social classes

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The present study examined the other-stereotype, meta-stereotype, intergroup relation, and their relationships. The sample consisted of 52 higher social class members and 69 lower social class members. Two different questionnaires were constructed for higher social class members and lower social class members in a former study. Each questionnaire elicited traits constituting meta-stereotype, other-stereotype and intergroup relations (the desire for contact, outgroup attitude and perceived intergroup relation). The result showed: (1) For both higher and lower social class, most aspects of meta-stereotype were positive, while other-stereotype was relatively negative; (2) For both higher and lower social class, desire for contact was passive, outgroup attitude and perceived intergroup relation were at middle level and outgroup attitude of higher social class was significantly higher than that of lower social class; (3) For higher social class, the relationship between intergroup relation and meta-stereotype was not significant, intergroup relation was only positively related with some aspects of other-stereotype. But for lower social class, the relationships between intergroup relation and meta-stereotype, some aspects of other-stereotype were very significant; (4) In the intergroup relation structure model of higher social class, other-stereotype had a positive effect on outgroup attitude, and outgroup attitude had a positive effect on desire for contact. Meanwhile, in the structure model of the lower social class members, meta-stereotype had a positive effect on outgroup attitude, and outgroup attitude had a positive effect on desire for contact and perceived intergroup relation. In conclusion, the meta-stereotype has a significant impact on intergroup relations for lower social class while other-stereotype has significant impact on intergroup relations for higher social class.

Keywords: *other-stereotype, meta-stereotype, intergroup relations, social class*

Methodological aspects and psychosocial implication of the authentication counselling

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The author intends to expose the method of authentication counseling through analysis practical cases (developed and/or analyzed in terms of the scientific work of the department of ontopsihology of the faculty of psychology of the St.-Petersburg State University) and demonstrate how psychological counseling can help to individualize the optimal specific action for the individual in his every-day life and business leading him/or her to self-realization. This study investigates how to help a person apply all the abilities of his mind and a creative potential in any situation, or how any realistic situation or a problem can be a tool for or a new step to self-realization of the personality. Solving of this issue is fundamental for the modern psychology task. The transition from psychotherapy-treatment to work with sound individuals, intelligent operators of collective values – has demanded developing of more efficient tools. Authentication counseling can be used as psychological assistance to sound people. The demand of such assistance is becoming very common in the modern society. Authentication counseling is fundamental in all the areas in which man is defined as an intelligent operator of collective (social) values. It helps to identify the optimal investments of the individual capabilities and intelligence and, in essence, analyses what enables individual intelligence. The concept of the authentication counseling has been developed in terms of the ontopsihological school – a modern scientific approach in psychology, which analyzes human being as a unity of action, as an integrated personality. Subject of analysis of ontopsihology is psychic activity, inherent in human phenomenology, or individual psychological experience of a human being. Ontopsihology individualizes causes that define this experience and elements that can resolve it. Despite the fact that ontopsihology has received a great deal of attention, based especially on the evidence of its effective application to psychotherapy and psychosomatics, resulting in the disappearance of the symptom, the psychotherapeutic resolution is just one of its tools. Its fundamental aim is that of fostering formation of the efficient social leaders and operators - those who can provide effective solutions for the different social groups and society as a whole. The cases presented by the author will demonstrate the

efficiency of this method applied to increase the productivity of the social operators in different areas of societal activity.

Keywords: *authentication counselling, self-realization, personality, intelligence, ontopsychology*

Migration and health anxiety: Explain!

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In an attempt to cross-fertilize Cross-Cultural and Clinical Psychology, the presentation seeks to explain why Hypochondriasis (Health Anxiety) appears to be the “chosen psychopathology” of immigrants, when compared to natives. The proposed Control-Compensation Model of Mood-and Anxiety Disorders aims to demonstrate how the entire spectrum can be construed as attempts to (dysfunctionally) compensate for (a perceived) loss of control, with Hypochondriasis incidence found increased in migrant populations. As an advance on the Terror Management Theory (i.e. culture buffers against mortality-awareness, e.g. Greenberg et al 1997) and the Mortality Salience Hypothesis (i.e. mortality salience increases other-culture intolerance, e.g. Rosenblatt et al 1989), the presentation proposes the Reverse Mortality Salience Hypothesis (i.e. other-culture intolerance increases mortality salience, Williams 2004). Results show that when compared and contrasted, the history of empirical findings as to the above (cf Still 1961;. Ward 2001), as well as the author’s own current clinical practice, reveal the robustness of the process hypothesised above. Hypochondriasis (Health Anxiety) indeed appears to be construable as one possible dysfunctional coping-mechanism used to counter the effects of Culture Shock. In conclusion, mindfulness of the proposed process-pattern, aids the attribution and treatment of Culture-Shock-induced Somatization, by orienting patients and practitioners towards Culture Learning. This would mean a timely re-focusing of resources at a time of hugely increased global mobility, like the present.

Keywords: *hypochondriasis, migrants, culture shock, reverse mortality salience hypothesis*

Mirror self-recognition in children with and without autism spectrum disorder

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Several studies suggest some aspects of self-awareness are diminished and/or atypical in children with autism spectrum disorder (ASD). However, there are few studies that report whether individuals with ASD show temporally extended self-awareness (awareness of one's place in and continued through time). In this study, we intended to examine temporally extended self-awareness in children with and without ASD, using a mirror self-recognition paradigm. The participants were 10 children with ASD (ASD group), aged 7-12 years of age (social age 2.5-4.6 years), who enrolled in a primary school for children with special needs in Sendai, Japan. The control group comprised 23 children without ASD, aged 2.5-4.5 years of age, enrolled in a nursery school in Sendai, Japan. Two visual feedback conditions were set (1-sec delayed image / live image). The task was performed in a within-subjects design and the rouge task was performed. The experimenter covertly put a sticker (2.0cm in length) on the child's forehead and then moved the child to the front of a video screen. The child was seated facing the video screen and required to play the JANKEN (scissors-rock-paper) game with a specular image on the video screen. The JANKEN game is one of the popular games that younger children easily engage in, and we intended for children to be aware of the contingent relationship between their action and visual feedback in the video screen. The responses to the covertly placed sticker (mark directed behavior) were categorized into 2 behaviors: remove or touch the sticker, and no response. In the analysis, we examined the association of mark directed behaviors with visual feedback conditions, in two groups. The percentages of children who removed or touched the sticker placed on their forehead

were as follows; of the ASD group, 20% in the 1-sec delayed condition and 50% in the live condition; and of the control group, 48% in the 1-sec delayed condition and 65% in the live condition. Children who could remove or touch the sticker in the live condition but not in the 1-sec delayed condition comprised 30% of the ASD group and 17% of the control group, respectively. For comparison between the two groups, no significant associations were found between responses in delayed visual feedback factors and age factors (SA in ASD group and CA in control group). These findings suggest that children with ASD may be sensitive to detecting synchronicity in their own action and visual feedback in the mirror image, compared with control children who were matched on social age. Also, children with ASD may have specificity for development of temporally extended self-awareness.

Keywords: *mirror self-recognition, autism spectrum disorder, temporally extended self-awareness, visual feedback, Japan*

Misconceptions about modern psychology among Japanese first-year university students

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In this study, we investigated the misconceptions about modern psychology among Japanese first-year university students. We used questionnaires to identify the kind of misconceptions students have. We also identified misconceptions among Japanese correspondence course students to compare the results of both groups. Participants were 251 first-year university students (86 males, 165 females) in the faculty of human science (HS group), and 32 correspondence course students (4 males, 28 females) in the faculty of liberal arts (LA group). Most of the students in LA have employment (age range 23-66, mean age 40.9) and have already attended some lectures on psychology (as a general education). We conducted a questionnaire about misconceptions on the first day of each class the students took. The questionnaire consisted of

40 question items which seemed correct from a commonsense point of view, but were all incorrect based on the psychological knowledge (e.g., “there is no relationship between the teacher’s expectations for students and the scholastic performances of the students”). The students in HS and LA were instructed to judge whether these question items were correct. Resulting from the overall mean percentage of correct answers, the students in HS have less correct knowledge about psychology than those in LA. The question items with low percentages of correct answers in HS and LA groups included descriptions about “perception”, “memory”, “psychophysiology”, and “personality/intelligence”. These results show that the students in both groups mainly have misconceptions concerning basic psychology. The percentages of correct answers were lower in the HS group than the LA group in all of the lower 10 question items, except for the items about “psychophysiology”. We found that the students in HS have more misconceptions about modern psychology than the students in LA. We considered that this difference arises from not only the academic history of the LA group (attending lectures on psychology), but also social experiences they have had. We also found that the students in HS and LA commonly have less correct knowledge concerning basic psychology. Our results suggest the need for continuing professional education in psychology.

Keywords: *modern psychology, misconceptions, Japan, university students, professional education*

Modeling the relations among students’ epistemological beliefs, goal orientations and cognitive engagement strategies

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The study proposed a model to explain how epistemological beliefs and goal orientations related to cognitive engagement strategies. It is suggested that epistemological beliefs influenced one’s cognitive engagement strategies through the effects of goal orientations. Participants were 323 eighth grade students in Taiwan. The three variables were measured using the Epistemological Belief Scale, Goal Orientation Scale, and Cognitive

Engagement Scale. The data were analyzed using hierarchical regression with LISREL 8.54 and applied maximum likelihood method. The χ^2 (χ^2 (66, N=323) = 235.87, $p < .05$) of this model was significant, however, the goodness of fit of GFI(.91), NFI(.92), IFI(.94) and NFI(.91) values were over .90, RMSEA(06) values was less than .05, and PGFI(.66), PNFI(.57) values were greater than .50, which is normally considered as an indication of acceptable fit. The epistemological beliefs significantly influenced deep processing strategies ($\beta = .57$, $p < .001$) and surface processing strategies ($\beta = .18$, $p < .05$) in Model One. However after mastery, approach-performance and avoidance-performance goals added, the epistemological beliefs influencing deep and surface processing strategies were not significant in Model Two. The epistemological beliefs influenced deep and surface processing strategies indirectly through mastery, approach-performance and avoidance-performance goals. This evidence showed the importance of the mediating process of goal orientations between epistemological beliefs and cognitive engagement strategies. The sophisticated epistemological beliefs positively influenced deep processing strategies and surface processing strategies indirectly through goal mastery. The naive epistemological beliefs positively influenced surface processing strategies through approach-performance goals. The sophisticated epistemological beliefs negatively influenced surface processing strategies through avoidance-performance goals.

Keywords: *epistemological beliefs, cognitive engagement strategies, goal orientation, approach-performance goals, avoidance-performance goals*

Money and attitude: A case study among students of a private institution of higher learning in Malaysia

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This study aims to investigate the perceptual attitude of students in a private institution of higher learning in Malaysia. Students' perceptual attitude towards money was determined based on the four-factor construct, namely power-

prestige, retention-time, distrust, and anxiety. This four factor construct was first developed by Yamauchi and Templer in 1982. In this paper students' perceptual behavior was also compared according to gender, credit card usage, pre-university education, and cash affluence. The study was a survey using self-administered questionnaires. Respondents were chosen using a cluster random sampling technique. A total of 311 respondents participate in this survey. Mean scores and SDs were used to describe the money attitude pattern whilst t-tests and one way ANOVAs were used to test for significant differences according to students' demography. Results indicate that the predominant attitude is time-retention ($M = 4.25$, $SD = 1.02$), respondents display attitude that signifies future orientation, this is followed by anxiety ($M = 3.77$, $SD = 0.93$) again related to being cautious of protection and security. The subsequent factor is distrust ($M = 3.74$, $SD = 0.96$), the feeling of hesitance, suspicious, and doubtful. The least prevalent attitude is power-prestige ($M = 2.42$, $SD = 0.90$), attitude of using money to impress and influence others. In terms of demography, gender does have some influence on money attitude; there is a significant difference between males and females on their perceived attitude towards money with regard to anxiety. Having credit cards does not influence respondents' money attitude significantly, and pre-university education as well as the amount of pocket money does not have any bearing on students' money attitude. Findings support existing literature and point to the importance of understanding money attitudes. Implications of the study and recommendations for further research are discussed.

Keywords: *attitudes, money, anxiety, Malaysia, students*

Mood states, self-efficacy and collective efficacy in a young female volleyball team

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The aim of the present study was to evaluate the correlation of mood states, self efficacy and the perception of collective efficacy in volleyball athletes. Sample was composed of twelve female athletes (aged 14 to 15 years) belonging to a volleyball team in São Paulo. Data was gathered during 30 sessions of training and games. For the assessment of mood states it was used the POMS test, in its six variables (tension, anger, vigor, depression, fatigue and confusion) and the IEEA (Index of actual emotional equilibrium). Assessments were performed in two different moments: before and after the sessions. The first assessment (M1) was done at the moment the athletes arrived the game settings, before any contact with the training staff; and the second one (M2) at the ending of the training. For the assessment of the self-efficacy and of the perception of collective efficacy it was inserted at the POMS sheet, additional questions regarding individual self and collective perception of performance during trainings. These additional questions ranged in a scale from 1 to 5 (5: very well). For the statistics it was used the Person Correlation Test, considering significant "r" values those close to 1 for a p-value of < 0,01. Results have not shown significant correlation between questions and mood states before training (M1). However, in M2, correlating was significant among the two scales and all the mood states ($r = 0.62$; $p < 0.01$). Data analyses indicate that mood states in M2 did not suffer interference of the conditions presented by the athletes in M1. Oscillations in mood states (tension, depression, anger, fatigue and confusion) showed a negative correlation. Vigor and IEEA scores presented to be positively correlated, evidencing the improvement of mood curves associates with better judgment of the performance, in the individual assessment as for the collective one. Correlations among the additional questions and the similar patterns of mood in the two scales put in evidence the influence of self-efficacy in the perception of collective efficacy.

Keywords: *mood, self-efficacy, collective efficacy, athletes*

Mother's personality disposition and conduct disordered child's perception of the mother

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The present study aims to discover the personality disposition of three groups of mothers having children with conduct disorder (CDC), dysthymic disorder (DDC), and normal children (NC), as well as the children's perception of their mothers. Participants were 30 male children in each group, aged 9 to 13 years, meeting the criteria for conduct disorder (experimental group) and dysthymic disorder (control group), according to the DSM IV, and their mothers were assessed. The Neo Five Factor Inventory and Parent-Child-Relationship Scale were administered on mothers and their children respectively. The mothers of CDC (CDM) and DDC (DDM) had high neuroticism and low agreeableness compared to the mothers of NC (NM). The CDM had more extraversion than DDM and NM. The CDC perceived their mothers as less loving, more rejecting, neglecting, demanding and punishing compared to the other two groups. The CDM's extraversion and agreeableness were positively correlated with the CDC's perception of CDM as indifferent and rewarding respectively. The relationship between extraversion and indifference suggests a lack of emotional closeness between the mother and child. The relationship between agreeableness and rewarding implies that agreeableness is a preferred characteristic in CDM. The poor score on agreeableness shows mothers' incapability to cater to their children's desires. The CDM's high neuroticism and extraversion with low agreeableness, resembling an externalized pattern of behavior, could have an immense role in shaping the child's behavior in the same direction. This personality of CDM fails to confer CDC with a stable cognitive structure for such a significant person in their lives, and cannot assure the children a sense of security. It could become difficult for a child to find a stable caregiver image of his mother owing to the cognitive competition he could face in deciphering the positive characteristics of the mother being amalgamated with a variety of negative ones, consequently forming an ambiguous cognitive structure of the mother. Presumably, a child's immaturity makes him unable to integrate behaviour of wide variability into a meaningful gestalt perception of his mother. Thus, the child with poor attachment

perhaps develops a negative internal model of the mother which breeds ground for hostility and externalised behavior in himself.

Keywords: *conduct disorder, dysthymic disorder, personality, mothers, children*

Music effects and emotional reactions on simulated driving performance and vehicular control

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Road-Traffic accidents are a leading cause of death in Portugal. The automobile is currently the most popular and frequently reported location for listening to music. Music increases driving risks by competing for attentional space; the greater numbers of temporal events which must be processed, and frequency of temporal changes which requires large memory storage, distract operations and optimal driving capacities. The present study explored the effects of music on PC-controlled simulated driving and assessing emotional reactions by means of Skin Conductance Responses (SCRs) and Heart Rate (HR). The sample was composed of 39 drivers, 21 males and 18 females, with a mean age of 25,41 ($SD=5,45$). The participants had passenger car licenses for on average 5,5 Years. The results showed that music consistently affected both simulated driving speed and perceived speed estimates. Moreover, that simulated driving while listening to fast-paced music would increase HR and SCRs. Disregarded red traffic-lights, lane crossings, and collisions were most frequent with fast-paced music. Implications of the study point to a need for driver education courses to raise public awareness about the effects of music during driving

Keywords: *driving accidents, music, attention, Portugal*

Musical ability and reading ability

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The present study investigated whether better musical ability was related to better reading ability, on the basis that music is related to memory that is crucial to reading acquisition, music improves auditory temporal processing that is relevant to phonological processing, and children undergoing music training have improved reading skills. Forty-one undergraduates participated in various language tasks. Musical intelligence of multiple intelligence, pitch discrimination, rhythmic and melodic patterns identification and music reading were also examined. Participants were divided into high- and low- ability groups based on their overall musical ability, their ability to discriminate pitch, to identify music pattern, to read music, and their musical IQ. Results indicated that participants with formal music training were better in pitch discrimination, music reading and musical IQ. However, they did not perform better than their counterparts who received no musical training in language proficiency, irregular word and pseudo-word reading. Participants who had better musical abilities also did not outperform their low-ability counterparts in these language measures. None of the music measures correlated significantly with the language measures. It was concluded that music training, though it can improve individuals' musical ability and musical IQ, does not necessarily lead to better reading ability. The age group of participants and the sensitivity of the music test used might provide insights on the current findings. The relationship between musical ability and reading ability requires further investigation. Practical implications of music in various cognitive tasks were discussed.

Keywords: *musical ability, reading ability*

Narrative family therapy, eye movement desensitization and reprocessing (EMDR) and adoption: an intervention protocol

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From the model of Narrative family therapy we use tales that could symbolically represent in therapy settings a person or a legal entity, both individual and collective, and which expresses a personal identification, a family tie, a community link or a socially recognized status or personal worth. Externalisation, in narrative family therapy, is a process to “get out” from the person any element or quality that is transformed in some with entity (White, 1991; White y Epston, 1993). In psychotherapy, externalising is the use of language to convert problems that affect the person or family on to an independent entity. This transformation allows people to fight against them or to view them from a new perspective. Externalisation technique through the metaphoric use of tales as external representation of family entity and individual’s worth inside the family system is applied in children adoption cases. The objective here is not to fight against the external representation of the family. We use tales inside the symbolic techniques that permits families to work together with meanings, individualism and cohesion within their members, and after adoption. We present a therapeutic protocol that combined EMDR and narrative family therapy externalisation techniques. We expose in a format of clinical case report the therapeutic work with a family that have adopted a child who suffer of a simple phobia. Using the protocol we describe above we carried out an analysis of the therapeutic issues and benefices of EMDR and narrative therapy in these family processes. This protocol has been useful to manage the phobia symptoms and to improve the adoptive family identity and cohesion. The combined approach we describe could help adoptive families to understand and to interpret the meanings from the construction that family systems make of their own world and relieve psychological symptoms that children could present.

Keywords: *narrative family therapy, externalisation, adoption, symbolic techniques, family identity*

Nature and types of ethical transgressions by registered psychologists in South Africa

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In the past ten years or so there have been an increasing number of complaints lodged against professional psychologists in South Africa. This paper reports on the findings of a study that investigated the nature and types of ethical transgressions by psychologists in South Africa. Specifically the study focused on the ethical transgressions that were adjudicated by the Professional Board for Psychology’s Committee of Preliminary Inquiry during a four year period (i.e. January 2006 to December 2009). Archival material comprising of all cases brought before the Committee of Preliminary Inquiry were accessed and analyzed. The mandate of this Committee is to deal with all matters relating to preliminary enquiries regarding complaints against professional psychologists and determination of accounts and fines in terms of the Health Professions Act (South Africa). More than 250 complaints against professional psychologists in South Africa were received by the Committee of Preliminary Inquiry during the period 2006 to 2009. The majority of the ethical transgressions (30%) related to issues of professional competence. In this particular situation most of the complaints related to situations where psychologists were operating outside their scope of practice. The second highest category of ethical transgressions related to issues of professional relations (26%). The commonest problem here relates to instances where psychologists were engaging in professional procedures without appropriately obtaining the written consent of their clients. The results of this study are discussed in the context of the challenges relating to shortage of psychologists and the problems associated with the training of psychology professionals in South Africa and other developing countries.

Keywords: *ethical practice, complaints, professional competence, South Africa, professional relations*

Need for cognitive closure and task factors on information searching behaviors on internet

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The aim of this study is to explore the effects of need for cognitive closure and task factors on information searching strategies on the Internet. Need for cognitive closure refers to a desire for an answer to a question and an aversion towards ambiguity on information acquisition (Webster & Kruglanski, 1994). Meanwhile, information science researchers have long assumed that the tasks participants are engaged in are essential to information seeking and retrieval interactions (Marchionini, 1995; Wilson, 1981). Thus, this study focuses on how the two theoretical frameworks affect individuals' information searching behaviors on the Internet. There were 92 students, mostly undergraduate in a public university in Taiwan, participating in this study. First, the Scale of Need for Cognitive Closure (SNCC) was assigned to the participants and a questionnaire was used to collect demographic data. After analyzing the questionnaires, we chose 10 high scorers of SNCC and 10 low scorers from the participant pool then assigned them two information searching tasks: a closed-structured question and an open-ended question. We videotaped how they did the two searching tasks on the computer screens and recorded all searching activities. Last, we had interviews with them while the screen capture video was played, identifying their information searching strategies over the two tasks. No matter how high the scores of SNCC were, those 20 participants showed similar strategy use for each task. They tended to locate information, browse the webpage structures, and directly find the targeted item for the closed-structured task. For the open-ended task, the participants scanned through the information, looked carefully on one single page, and then tried to recognize one from a group of possible items. The results seem to be in favor of task factors over need for cognitive closure on individuals' strategy uses on the Internet. The core ideas of need for cognitive closure and how task requirements initiate one's motivation and strategy are discussed in this present study. The differences between real information searching behaviors and those behaviors in our controlled laboratory settings and applications for classroom instructors are discussed at the end as well.

Keywords: *cognitive closure, motivation, information search, internet usage*

Needs analysis for an Indigenous school-based social and emotional wellbeing program

SWANNELL, S. (University of Queensland), HAND, M. (The University of Queensland), MARTIN, G. (The University of Queensland), SHEEHAN, N. (Swinburne University)

The aim of the current study was to conduct a needs analysis among Aboriginal and Torres Strait Islander year eight students, their parents, community elders and school teachers from regional (Mount Isa and Ingham) and metropolitan (Brisbane) Queensland as to what elements are important for the development and maintenance of a school-based social and emotional wellbeing program. 79 Indigenous students from three schools in regional and metropolitan Queensland participated in the Aussie Optimism Program (AOP), a 20 week school-based mental health promotion program developed for Australian year eight students (Roberts, 2000). A total of 15 teachers (Indigenous and non-Indigenous) were trained to deliver the program. Feedback from students, parents, community elders and teachers was collected via surveys and discussion groups. Feedback from Indigenous students, parents, community elders and teachers indicated an urgent need for Indigenous school-based social and emotional wellbeing programs. Furthermore, respondents thought that the key themes contained in AOP (resilience and social skills) were suitable for Indigenous school children. However, respondents considered most of the AOP content culturally inappropriate, not engaging or irrelevant to Indigenous youth. The role plays, scenarios, language and illustrations were deemed as particularly inappropriate. High rates of illiteracy among Indigenous students were also highlighted as a potential problem, given the majority of exercises in Aussie Optimism require students to complete work books. There is an urgent need for the development of Indigenous school-based social and emotional wellbeing programs which contain content relevant to Indigenous values such as spirituality, family and country and are delivered in a way which will empower and engage Indigenous children.

Keywords: *Indigenous students, school-based program, social and emotional wellbeing, illiteracy*

Neuropsychological assessments of depressiveness for suicide prevention

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Following the death of a relative (especially a spouse, beloved, parent or child) there are periods of grief, anxiousness, insomnia, disturbances and depressive complaints. After depression, bitterness, isolation, and irritability may appear too. Suicide may be briefly defined as the human act of self-inflicted, self-intentioned cessation. In countries reporting to the World Health Organization—including the G8—Japanese suicide rates have maintained a higher level during the last five years (2.4 times to the United States of America (USA), 3.4 times to the United Kingdom (UK), and Italy). The key to reduction of suicide lies in recognition and diagnosis—the perception of premonitory depressive signs and clues. Three kinds of psychological tests (Harm avoidance, Carroll Rating Scale for Depression, and Beck Depression Inventory) were adopted for the evaluations of depression in 220 graduate students. The correlations were evaluated between electroencephalographic topography-potentials and the three kinds of depressive scales. Electroencephalographic (EEG) potentials recorded monopolarly from 16 placements over frontal, central, parietal, temporal, and occipital scalp locations in the international 10-20 system with linked mastoides or ear lobes. Electrodes were also placed on the lateral canthus and above the supercilium of the left eye in order to measure the electrooculographic and electromyographic responses. The Fpz was the earth electrodes. The statistical significance of neuro-physiological and psychological differences was evaluated by ANOVA. From results of structural equation modeling and multiple comparisons, the effect of HA1 (HA1: anticipatory worry versus optimism) was ascertained on depression among HA (HA2: fear of uncertainty versus confidence, HA3: shyness versus gregariousness, HA4: fatigability and asthenia versus vigor). The EEG analyses presented the prominent decrease of α -power

spectrum at frontal lobes and, β power decrease at left frontal lobes on depressiveness. These electrophysiological signs might be indicative of depressive levels.

Keywords: *depression, suicide, electroencephalogram (EEG), structural equation modeling*

New micro-cognitive metrics from cognitive system theory: Objective mapping of ADHD and dyslexia versus peer group

BURTON, P. (Australian Catholic University)

A scientific account of human cognition remains to be settled. This paper describes a specific model of cognition, developed from a five axiom analysis (investigating learning, experience, cognitive control, knowledge and the self-model), of the mind-brain interaction process. It reflects a convergence, from diverse evidence, to an explanation of the nature and role of consciousness, highlighting consciousness as the means of control in human cognition. The theory describes major transitions in the human form of this control towards adulthood. In particular, basic human cognition, initially similar to the processing of other mammals, is shown to respond to exogenous control leading to the development of new kinds of sequentiated cognition (punctuated cognition). Building further on this second level of cognition, a new more elegant and flexible form of conscious control emerges corresponding to advanced (vector-targeted) cognitive processing associated with the self-model. The major survival benefit of this elaborated cognitive competence is to complement the instrumentally reactive form of response more complex environmental challenges with a more deliberate, navigational mode of tasking. At each stage of advancement, it is the emerging flexibility of new kinds of conscious control over cognition that lead each transition. The ultimate transition to self-conscious control reflects the cognitive acquisition of an implicit two-dimensional field of control, wherein decision-making automatically collates foregone choices. These are captured to contextual behavioral repertoire, each one a systematic enhancement of behavioural options underpinning future

intelligent performance. This model imputes a cognitive aspect to endogenous eye-blinking, reflecting the internalised gating system of punctuated cognitive development. Data will be presented from a preliminary study supporting this proposed role and suggesting that eye-blink analysis may prove to be of significant value in the assessment of cognitive performance generally. For ADHD and dyslexia, abnormal cognition diagnoses that have been quite resistant to any objective cognitive function assessment, objectively discriminating mapping metrics (from principal components of individual variance in blinking during a structured task) may afford an effective recognition, mapping and therapy-tracking tool.

Keywords: *Cognitive system theory, Attention Deficit Hyperactivity Disorder, Dyslexia, Eye movement, Mapping*

Noise-stress relationship: Moderation effects of individual need for closure

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Previous research suggests that stressful noise, (when the noise is higher than 90 decibels) influences both physiological (for example, increased blood pressure) and psychological levels (negative effects on behavior or relationship; Evans & Cohen, 2004). The aim of this research is to verify if individual differences on Need for Cognitive Closure (NCC; Kruglanski, 2004), moderate the negative effects caused by noise. The NCC is an epistemic motivation that can be conceptualized as individual disposition but can be activated also by specific environmental characteristics such as noise, mental fatigue or temporal pressure. Thus, individuals with need for closure can better sustain an environment that activates closure through noise as it fits their motivation (De Grada & Livi, 2009). Seventy-nine employees of a motor factory who are exposed to environmental noise were recruited. Each participant completed the shortened version of the Need for Cognitive Closure Questionnaire (Pierro & Kruglanski, 2006), the scale aimed to measure the dispositional tendency of Need for Closure with five subdimensions (Desire for

predictability, Preference for order and structure, Discomfort with ambiguity, Decisiveness, Closed-mindedness); the Noise Sensitive Scale (Weinstein, 1978) that measures the subjective level of noise sensitivity; and the Job Effort Scale (Brown & Leigh, 1996) that measures the level of job efforts performed. The hypothesis is that NCC moderates the noise-stress relationship: thus, subjects with a high score on NCC and high in noise sensitivity reduce negative effects of environmental noise on job effort. To test these hypothesis we have used a moderation analysis (Aiken & West, 1991), with Need for Cognitive Closure, Noise Sensitive and Need for Cognitive Closure*Noise sensitive as predictors, and Job effort as criterion. The results corroborate the hypothesis; indeed the results indicate a moderation effect of the NCC showing that individual differences in epistemic motivation reduce negative effect of noise on stress. Thus, individuals are motivated to closely adapt more to a stressful situation as their cognitive epistemic structure better fits the noisy environment, reducing stress in turn.

Keywords: *stressful noise, need for cognitive closure, noise, mental fatigue, stress*

Non-suicidal self injury among Japanese adolescents: Comparison between non-suicidal self injury among adolescents from a normal population and among adolescents from a hospital referred sample

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The aim of this study was to compare non-suicidal self-injury (NSSI) among adolescents from a normal sample to NSSI among adolescents from a hospital referred sample. A total of 632 adolescents from a community sample and 48 adolescents from a hospital referred sample participated in the study. The adolescents from the community sample completed a questionnaire that consisted of experiences of eight kinds of NSSI, as well as the

Adolescent Dissociative Experiences Scale (A-DES), Children's Depression Inventory (CDI), and the State-Trait Anxiety Inventory for Children (STAIC-Trait). Adolescents from the hospital referred sample completed the questionnaires of A-DES, CDI, and STAIC and they were interviewed about their experiences of NSSI and suicidal ideation. Participants were divided into four groups; non-NSSI group among community population (C-nNSSI), NSSI among community population (C-NSSI), non-NSSI among hospital referred sample (H-nNSSI), and NSSI group among hospital referred sample (H-NSSI). The score of A-DES, CDI, and STAIC were compared. Between C-NSSI and H-NSSI, the methods of NSSI were also compared. The results of ANOVA revealed that H-NSSI scored higher on A-DES, CDI, STAIC than H-nNSSI. H-NSSI tended to engage in NSSI with using implements, for example knives. About 80% of H-NSSI experienced suicidal ideation. H-NSSI experienced higher dissociation, depression, and anxiety than C-NSSI. H-NSSI have suicidal ideation thus they are clinically at risk.

Keywords: *non-suicidal self-injury, adolescents, adolescent dissociative experiences, state-trait anxiety, children's depression*

Obesity: A socially acceptable target of prejudice?

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This study examined the applicability of the Motivation and Opportunity as Determinants (MODE) model, a model previously applied to racial discrimination, to predict whether implicit weight prejudice would necessarily result in behavioural discrimination towards obese targets. This sample consisted of 186 undergraduate students (121 female, 65 male) with a mean age of 19.74 ($SD = 3.90$). A personalized Implicit Association Test (pIAT) was used to measure participants' implicit weight prejudice and the Motivation to Control Prejudiced Reactions (MCPUR) scale was used to measure participants' motivation to hide weight prejudice. These factors were used to predict subsequent expressed (or hypothetical) and actual behaviour, as measured by a mock

Students' Representative Council (SRC) election task and a Lost Email task. Exploratory analyses of open-ended qualitative responses were conducted to determine the reasons that participants discriminated against obesity. The MODE model was not found to predict the prejudice-behavior relationship; however, both weight prejudice and discrimination were highly prevalent in the sample, $p < .05$. Exploratory analysis revealed that 21.2% of participants explicitly stated that they voted for a candidate for no other reason than that they were thin. Furthermore, 42.9% used a positive adjective, such as 'likeable' to describe the thin SRC candidates, whilst 0% used a negative adjective to describe the thin candidates. The MODE model was concluded to be an inappropriate model for weight prejudice due to the qualitative differences between weight and racial prejudice. It was concluded that many consider obesity to be a socially acceptable target of prejudice; therefore, the relationship between prejudice and behaviour may be more complex than the factors considered by the MODE model. Future research should attempt to affect positive change and reduce the social acceptability of weight prejudice, without ignoring appropriate health messages about the serious health consequences associated with obesity.

Keywords: *obesity, weight prejudice, discrimination, Motivation and Opportunity as Determinants (MODE) model*

Occupational stress and mental health of Maharashtra police constables

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The aim of this research was to assess the level of occupational stress and the level of positive mental health of Maharashtra Police Constables. To assess the level of occupational stress of Police constables researcher the Occupational Stress Inventory- Revised by Osipow was used, and to assess the level of positive mental health the Mental Health Inventory by Shrivastava was used. The samples were divided on the basis of their tenure, that is, below the fifteen years of service and above the fifteen years of service. It is found that the constables who have

completed fifteen years of service have more occupational stress than constables who are below fifteen years of service. Further it is also found that the constables who have less tenure have good mental health than the constables who have more job tenure. Job tenure is one of the important factors which affect level of occupational stress and mental health.

Keywords: *occupational stress, positive mental health, occupational stress inventory, job tenure, police*

On group counseling with domestic violence female offenders

LANG, Y.C. (Da-Yeh University)

This study will be in cooperation with a Women's Jail in Taiwan to help female prisoners to adjust their behaviors and attitudes toward their family members. They have all committed domestic violence, many hurting their husbands severely, so it is very important to let them explore their inner self, and find a way to make peace with both themselves and their family members. Another aim of this study is to analyze the lives of these females in order to understand the causes and motives behind their violent events. The program will include 12 sessions with approximately 12 female prisoners, and each session will last for 2 hours. Since this program is designed to start in March, 2010 and ends in June, it is in the preparation stage at the moment. However, three questionnaires will be used to evaluate the participants' behaviors and attitudes toward family, relationships and the group dynamic, and a measurement will be used to understand their personality. As for group counseling, the researcher will try to use Solution-Focused Brief Therapy together with psychodrama and art therapy to create a supportive and warm atmosphere to let all participants feel accepted and willing to share their life stories with others. The results will be analyzed in June and a report will be finished by the end of July, 2010.

Keywords: *domestic violence, female offenders, group counseling, prisoners, solution-focused brief therapy*

On the concept of efficacy in public health care organizational development

RAGNEKLINT, R. (Lund University)

This study aimed to explore the use of the efficacy concept by conducting an epistemological trip from a modernistic, "objective" understanding of the concept to a postmodern, value contingent understanding. The use of questionnaires (N=340) for health care personnel employed at the clinics were examined and a diary-in-group method with political representatives of health care services, administrators and health care professionals (N=12). The study was carried out in a large medical care district in southern Sweden. It concerned the social construction of the concept of health care efficacy as applied to the merger of two surgical clinics, one of them a large university clinic, the other a clinic of lesser size in the same health care district. In the questionnaires subjects reported a strong criticism against the merger (~40%) and some 45% felt they had little or no influence over their work conditions and the organizational changes decided upon. Strong criticism was directed against the responsible political level. Concerning the interpretation of the concept of efficacy, despite the organizational decisions, some 80% of subjects declared that they experienced a sense of efficacy in their daily work. In the discussions and the interviews that took place between political leaders, administrators and care personnel, there was considerable criticism over the way political decisions were made. A clear breach between views regarding care and views concerning political matters was evident. The investigation considers various aspects of the efficacy concept, the seemingly self-evident economic rationality being questioned as based mainly on strict budgetary principles applied to small accountancy units. The examination puts into light the importance of longitudinal and macro aspects, and in addition, efficacy concepts such as time to reflect, making a worried patient feel relaxed, and cooperation with other clinics or external partners. It also unmasks a clear difference concerning the efficacy concept as interpreted by different hierarchical categories in the health care organization. The investigation shows the importance of motivating the

employees included, and finally, shows the major social and ethical implications of efficacy interpretations.

Keywords: *public health care, organisational development, health care efficacy, health care providers, Sweden*

Organizational development based on personal skills

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Through the development of skills is achieved alignment with the organizational environment and competitive advantages are obtained that provide great benefits to organizations. Skill development is today an essential practice to align talent with the organization's strategic plan, and thus not only create value have the talent required to meet the challenges of the workplace. Therefore, our research question was "what are the methodologies used to develop skills in leadership of organizations of consumer products in Colombia?" The research design was transactional. The population consisted of 12 human resources managers in various national and multinational organizations in the real sector. The sample consisted of 5 people working in the area and human resources in real sector organizations. This group was women aged 18-43 years, all with professional training in psychology, and two with specialization in human management. For data collection, management used the questionnaire-based Human Talent Development Processes (Uribe and Duke, 2008). The results showed Training, Coaching, Assignment and Outdoor Training committees are developing methods that 100% of organizations surveyed use for the development of skills of people in leadership positions. The programs had 80% self-use. Job rotation was 20% for instruction and training, and mentoring of use 0% as developing methods for people in leadership positions in companies surveyed. Moreover, the results show that 80% of those surveyed use some methodology or tool in order to measure the level reached after the intervention in leadership development. By contrast, 20% do not perform any measurement of people after having experienced some form of development. Similarly, 80% of companies

surveyed indicated some kind of monitoring during the development of people in leadership positions. 20% of all subjects surveyed did not make any follow-up during the development process. Assessment center, performance evaluation, and behavioral event interview were identified using the methodologies among the surveyed companies are. 360 degree evaluation was the least used tool to measure the level of skills development because of the great control of variables and factors. Regarding monitoring of development processes, we conclude that the vast majority of organizations surveyed, with both on track to accompany people who are in formal development process skills, and these accompaniments are performed in both the area of human management as the heads of people. It is realized that the responsibility for these processes is increasingly shared and that people belonging to different and unrelated to human processes within organizations, are becoming more involved and see the value added of these processes for themselves and their teams. On the other hand, we can also conclude that firms do not generate single development actions without a previous diagnosis, and perceived that these processes involve high development costs, both in physical resources, such as people's expectations. Another important aspect to mention is that the actions generated by these organizations are framed in different development projects, some with a corporate standard, others that are generated due to specific situations.

Keywords: *organisational development, personal skills, leadership, management, training*

Overclaiming as socially desirable responding: Investigating the effects of item desirability, forgiving wording, and the predictive ability of trait fear of negative evaluation and embarrassment within the study setting

SACCONE, E. (University of Adelaide)

Overclaiming occurs when questionnaire respondents claim knowledge of or an opinion about something that the researcher has in fact fabricated (Phillips & Clancy, 1972). The primary aim of this study was to advance knowledge of possible determinants of overclaiming. It was

hypothesized that it might arise, at least in part, from image-preservation concerns in the respondent. Thus, the theory of overclaiming as socially desirable responding was investigated. Participants were 101 native English-speaking Flinders University Psychology students. Respondents completed a questionnaire that measured perceived desirability of domains, overclaiming, trait fear of negative evaluation and embarrassment within the study setting. There were two instruction wording conditions; standard instructions and 'forgiving wording'. Overclaiming was higher on socially desirable items compared with neutral items. Forgiving wording significantly reduced overclaiming overall and for socially desirable items but not neutral items. Neither trait fear of negative evaluation, nor embarrassment within the study setting predicted overclaiming. Results indicate that overclaiming is linked with image-presentation concerns and can be considered a manifestation of socially desirable responding. However, explicit concerns about making a poor impression are not related to overclaiming. The results underscore the need for caution when interpreting self-report data, particularly when responses pertain to socially desirable activities.

Keywords: *overclaiming, socially desirable responding, item desirability, forgiving wording, trait fear*

Paranoid ideation, God concept and attachment in college students

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The aim of the current research is to investigate any relationship between dimensions of mental health and the concept of God in students of Medical Sciences. To this end, 513 students from Tehran Medical Sciences University and Iran Medical Sciences University were selected by means of proportional stratified sampling. Religious Concept Survey (Gorsuch, 1968), Paranoid dimension of Symptom Check List 90-Revised (Derogotis, et al., 1973) and Adult Attachment Scale (Collins, 1996) were administered on them. Regression analysis was used to analyze data. Results indicated that paranoid ideation of college students can be

predicted from the quality of attachment, and God concept (wrathfulness). In other words, students who perceive God as a wrathful entity, are more prone to experiencing paranoid ideation. In addition, an anxious attachment was associated with more paranoid ideation, however dependable attachment was associated inversely with paranoid ideation. The authors concluded that Paranoid Ideation can be predicted from conceiving God as a Wrathful entity. Moreover, anxious attachment style can predict Paranoid Ideation in college students.

Keywords: *paranoid ideation, god concept, anxious attachment, medical students*

Parental internal states reference and theory-of-mind (ToM) ability in autistic children

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This study investigated whether the quality, frequency or frame of parental internal states (IS) to children with Autism Spectrum Disorder (ASD): differed from typically developing children (TD); or was related to theory-of-mind (ToM) and emotion recognition (ER) abilities. Firstly, it was predicted that parental IS reference would be 'low' (low quality, low frequency, and independent frame) in the groups of children with ASD and 'high' (high quality, high frequency, and joint frame) for TD children. Secondly, it was expected that children with ASD exposed to 'high' parental IS reference would score higher on ToM and ER measures than children with ASD not exposed to 'high' parental IS reference. 31 child-parent dyads recruited from Government and private Primary schools, a Government Disability Support Agency, and a Speech Pathologist's client list around Melbourne and Geelong, were grouped by age (5 - 6 years and 10 -12 years) and diagnosis (ASD and TD). Parental IS reference was recorded, transcribed, and coded in to seven categories to determine the quality, frequency, and frame. Children were tested for verbal, ToM and ER abilities using verbal and non verbal measures. Hypothesis testing involved a multivariate analysis of variance (MANOVA) and an independent-groups t-test. Contrary to predictions, no significant differences were

found: in the quality, frequency, and frame of parental IS reference between children with and without ASD; or between children with ASD exposed and not exposed to 'high' parental IS reference and ToM or ER abilities. Exposure of parental IS reference to children with ASD and TD children is comparable. The quality, frequency, and frame of parental IS language showed no bearing on ToM and ER ability in children with ASD. Parental IS reference fluctuates with their child's development, whereby: categories change from sensory, emotion, and obligation towards more cognitively challenging categories; the frequency diminishes; frame of reference changes from independent to joint; and ToM and ER abilities improve.

Keywords: parental internal states, children, Autism Spectrum Disorder, theory of mind, emotion recognition

Perceived and actual impact of text messaging on young adults' driving performance: Self-report versus driving simulation

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This two-stage study had three aims: first, to provide a descriptive portrayal of young adults' self-reported engagement in text messaging while driving, perceptions relating to personal risk, and expectations about the detrimental effects of text messaging on driving abilities; second, to assess the extent to which writing/sending and reading text messages affects brake reaction time to critical events, lateral position variability and speed; and third, to determine whether prospective predictions about driving performance while text messaging relate to simulated driving performance. An online questionnaire was completed by 252 drivers (151 females, 101 males), aged 18 to 24 years. The repeated measures driving simulator experiment involved 42 participants 'driving' through a simulated environment displayed on a computer screen, using a steering wheel, brake and accelerator pedals. The three conditions were a control drive, text message reading and text message sending. The majority of

participants reported they had engaged in text messaging while driving, with many doing so on a regular basis. The majority of the sample also predicted that text messaging would have at least a moderate negative effect on their driving performance. No gender differences emerged in self-reported engagement in text messaging while driving, but females predicted the negative effects to be larger than did males. Optimistic bias was found in drivers' personal risk likelihood ratings relative to those for their peers and the average motorist, when considering the likelihood of being involved in a crash and of being caught by the police if concurrently text messaging. When sending and reading text messages under simulated driving conditions, brake reaction times were longer, while lateral position variability and speed variability were greater compared to the control condition. No relationship was found between drivers' predictions and simulated driving performance. Results provide insight into subjective and objective factors relating to text messaging while driving and contribute to the small empirical base regarding the impacts of text messaging on driving.

Keywords: text messaging, driving performance, young people, self-report, driving simulation

Perceived causes of the difficult situation, locus of control, and the behavior tendency towards cheating

WANG, J. (Chiba Institute of Science)

This study aimed to examine the effects of perceived external and internal causes of a difficult situation and locus of control on tendencies towards dishonest behaviors, which might make the difficult situation more favorable. Ninety-five Japanese college students participated in the study. They were presented with a scenario depicting one student taking a scholarship examination. The difficult situation was set as the student realizing that he/she could not gain a good mark during the examination because of certain external and/or internal causes. Participants were asked to imagine themselves as the student and judge the importance of the given external and internal causes, and then evaluate the motivation and

possibility to cheat under the situation. The results of multiple regressions showed that the perceived importance of external cause was positively related to the motivation for cheating. Whereas the perceived importance of external cause and perceived unethicness of cheating were positively or negatively related to the possibility for cheating, respectively. However, locus of control showed no relationship with both motivation and possibility of cheating. These results provided an empirical support to Bandura et al.'s (2002) mechanisms of moral disengagement based on social cognitive theory. The lack of relationship between locus of control and behavior tendency suggests that locus of control may have less influence in difficult situations where causes are clear. Implications of these results on prevention of organizational wrongdoing were also discussed.

Keywords: *locus of control, dishonest behaviors, cheating motivation, organizational wrongdoing, behavior tendency*

Perceived fatigue and stress tolerance in young athletes

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The aim of this study was to analyze and evaluate the importance of perceived fatigue and its relationship with stress tolerance in young athletes selected for elite level. Participants were 30 athletes, males and females, from 10 different sports. They were between 12 and 20 years of age. The study employed a descriptive and correlational design, and was multivariate, focusing on mood and stress tolerance. The following measuring instruments were used to measure mood: Profile of Mood States (P.O.M.S.; Mc.Nair, Lorr & Droppleman, 1971) and the abbreviated scale, Fuentes, et al. (1994). To measure stress tolerance the Recovery-Stress Questionnaire for Athletes, translated to Spanish, (RESTQ-Sport: Kellmann and Kallus, 2001), 76 items version, was used. The RESTQ-Sport questionnaire consists of 12 General Stress and Recovery scales along with seven Sport-specific Stress and

Recovery scales. The athletes completed the questionnaires from their homes using a web-based service (Teskal) during the 2007-2008 season. The SPSS statistical software was used to analyse the data. The sample shows a Mood State profile very similar to Morgan's (1980) "Iceberg Profile". The average score for the negative dimensions is very low, and the mean values for the positive dimensions are high, as seen in high performing athletes. When looking at stress tolerance, we see a low mean score in the dimensions that generate stress, while the values of the stress-recovery dimensions are high. Overall, the sample shows low mean values of perceived fatigue, with moderate significant negative correlations with physical fitness ($r = -.40, p < .05$) and with self-efficacy ($r = -.37, p < .05$), which are stress-recovery dimensions. There is also a positive and significant correlation with emotional fatigue ($r = .38, p < .05$), a stress-generating dimension. These results highlight the importance of perceived fatigue, measured with the P.O.M.S., because it cuts across stress tolerance, and helps us better understand the behavior of athletes geared to elite level performance. A reduction on the levels of perceived fatigue will increase the young athletes' stress tolerance, maintaining high self-efficacy, feeling more fit and avoiding overtraining states.

Keywords: *perceived fatigue, stress tolerance, elite athletes*

Perceived racism and mental health in Australia: The premier quantitative study

GRIGG, K. (RMIT University)

The present study aimed to provide the first quantitative exploration of the relationship between perceived racism and mental health in Australia. The sample consisted of 180 (males = 72, females = 108) participants recruited via flyers from around universities in Melbourne, via lectures at RMIT University in Melbourne and via e-mail from around Australia. Ages ranged from 18 to 66 years ($M = 27.11, SD = 9.54$). Sixty two participants were self-identified as non-indigenous Australian. One hundred and eighteen non-Australian participants were

processed as frequently (self-identified as Asian (n = 45), Middle-Eastern (n = 3), African (n = 2)), occasionally (self-identified as mixed (n = 27)) and infrequently (self-identified as European (n = 41)) identified as non-Australian. Participants completed a 90-item self-report questionnaire assessing levels of perceived racism (General Ethnic Discrimination Scale; GEDS), mental health outcomes (Depression, Anxiety, Stress Scales; DASS, Rosenberg Self-Esteem Scale; RSES) and demographic variables (age, gender, SES, Acculturation Index; AI, Multigroup Ethnic Identity Measure; MEIM). The following four hypotheses were tested. Hypothesis one: There will be a difference in the prevalence of self-reported racism across racial/ethnic groups. Hypothesis two: Higher levels of self-reported racism will predict higher levels of self-reported negative mental health outcomes. Hypothesis three: Demographic variables will be related to levels of self-reported racism. Hypothesis four: Demographic variables will moderate the effect of self-reported racism on self-reported negative mental health outcomes. Perceived racism was found to be more prevalent among non-Australian minority racial/ethnic groups than non-indigenous Australians and among more highly visible minority racial/ethnic populations than those less visible. Moreover, perceived racism predicted higher psychological distress, depression, anxiety and stress and its negative relationships with mental health outcomes were partly moderated by levels of acculturation and ethnic identity. Perceived racism did not significantly predict self-esteem. Greater acculturation to Australian culture was also found to be related to less perceived racism, whilst having a stronger ethnic identity was related to perceiving more racism. The results of this study predominantly concur with previous research from around the globe, which allows prior conclusions and inferences to be generalised with more confidence to Australia and Australia's minority racial/ethnic populations. Moreover, the current study provides an impetus for changes to legislation and tougher policies on racism in Australia.

Keywords: *racism, mental health, Australia, depression, anxiety*

Perceptions and beliefs on domestic violence in the Southeast of Mexico

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The beliefs and culture values are important factors in the attitudes and behavior of people in any country and each person gets a specific roll according to their cultural roots. The ideology of the male supremacy has prevailed and sometimes in order to assure it, men resort to violence, either physical or psychological. The present study was performed in southeast Mexico with the purpose of analyzing the perceptions and beliefs that people have over domestic violence -- men over women. Six graphic stories of domestic violence were designed and validated, reflecting the same event, that varied on the economic level of the victim (high, middle and low) and her behavior (submissive versus aggressive). A Likert type instrument that evaluated seven factors was developed to measure the perception of the participants who read the story. The sample was stratified by State, (Veracruz and Tabasco) place of residence (rural and urban areas) and sex (men and women). The results showed that there were no significant differences in the perception of the participants, concerning the characteristics of the victim. Nevertheless, sex of participants was found to have significant differences in the acceptance and justification of violence, as well as in several factors of the instrument, such as blaming the victim, or giving low importance to the fact. The area (rural versus urban) also was significant in several factors. As well as the state of residence of the participants. Results give us evidence of the importance of cultural values and gives support to the ecological model.

Keywords: *domestic violence, perceptions, gender differences, Mexico*

Perceptions of control of space as a factor in responsibility attribution and behavioural intent towards another person's litter

WOOLRYCH, T. (Murdoch University)

Environmental studies have investigated both socio-demographic and attitudinal variables, in relation to pro-environmental behaviours. The aim of this study was to investigate two other factors that have also demonstrated potential to influence these behaviours, but have previously received little attention - responsibility attribution and perceptions of control of space. Using responses (n = 193) from 1000 questionnaires delivered to high/low SES suburbs, differences in attributions and intent were explored across three areas of control of space conditions of (respondent's) yard, the street and the local park. Socio-demographic variables and attitudes towards litter (ATL), place attachment (PA), and community social responsibility (CSR) scores were assessed for their impact on both responsibility attributions and behavioural intent measures. Repeated measures ANOVAs revealed that control of space influenced both self responsibility attribution and behavioural intent measures in a similar manner. Multiple regression analysis revealed that only Age was (weakly) influential for self responsibility attributions whilst responsibility attributions to self (relative to council) and place attachment (PA) were influential on behavioural intent measures. A mediational regression analysis found that responsibility attributions only mediated behavioural intent and PA for the yard, but not the street or park. Overall, the factors involved in personal responsibility attributions and behavioural intent were quite distinct. The findings suggest that responsibility attributions and behavioural intent may be unique and separate elements of pro-environmental behaviour, and therefore should be investigated further. Control of space is discussed as a potential new direction for research through environmental design elements, and future environmental programs.

Keywords: *pro-environmental behaviours, responsibility, control, perceptions, place attachment*

Personal construct analysis of a vice-principal on conflicts in a high school as workplace through High Tea Method by using repertoire grid technique

INOUE, T. (Meiji Gakuin University), ITO, T. (Wako University)

The purpose of the present study was to explore the structure of conflict of a stakeholder in a high school by conducting the High Tea Method, which the authors had developed, by using repertoire grid technique. A vice-principal of a suburban high school participated in the study. First, he was asked to point out his experience of conflict in his workplace. An interview with those sentences of his conflict experience was conducted by repertoire grid method. A second interview was then conducted to interpret the constellation of MDS output. Results showed that the participant summarized four clusters of his conflicts in his experience as his personal attitude construct. High Tea Method, as well as PAC Analysis developed by Naito (1997), is found to be a significant tool to search for inner structure of personal construct. The specific methodological features of High Tea Method were also discussed. The combination of High Tea Method and repertoire grid technique was found to be useful for exploring the subjective structure of human individuals.

Keywords: *conflict, high tea method, repertoire grid technique, subjective structure, personal constructs*

Personal determinants of inclination to risk of sportsmen-divers

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Psychology which is more actively involved in solving problems important for sport, encounters the necessity of semantic space comprehension of the personal aspect of the risky behaviors of sportsmen. Risk is an inherent peculiarity of many kinds of sport. The degree and justification of risky behavior of sportsmen determine the efficiency of their training and sport activity. The aim of this research lies in determining individual and psychological peculiarities of personality of sportsmen-divers which are naturally connected with inclination to risk. The methods and organization of the research involved: theoretical methods, analysis, synthesis, comprehension and generalization of

literary statements; psycho diagnostic methods, among the latest – O. Sannikova's test-questionnaire of qualitative characteristics of inclination to risk, Korzhova's questionnaire, Kettel's personal questionnaire 16-PF, and Losenkov's questionnaire of impulsivity. Statistical data processing and graphical presentation of the results were carried out on the basis of the statistical programs package SPSS 10.0. On the basis of the analysis of individual and psychological peculiarities of a sportsman-diver personality with maximum expressiveness of inclination to risk (Risk-max), the psychological portrait was built and its main characteristics are independence, aggressiveness, dominance, stubbornness (E+); social courage, riskiness, spontaneity (H+); practicality, independence, responsibility, strength of mind, self-satisfaction, (I-). Sportsmen-divers with minimum expressiveness of inclination to risk are characterized by dependence, lack of self-sufficiency, helplessness, sensitivity (I+); sagacity (N+); conservatism (Q1-). Moreover, such sportsmen are not self-confident, reserved while expressing their feelings, and they have a narrow circle of acquaintance (H-). Obedience is characteristic to them and it is displayed by dependence on other people, they need support and seek it in social environments, they are inclined to be guided by group regulations. Furthermore, they are conformal, modest, gentle (E-).

Keywords: *sport, risk inclination, personality characteristics*

Personality and social anxiety disorder: The impact of personality on treatment outcome

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Social phobia is characterized as a marked and persistent fear of social or performance situations. It is estimated to be one of the worst 30 diseases in terms of disability adjusted life years lost in Australia. Despite empirical evidence for the effectiveness of cognitive behavioural therapy (CBT), clients completing CBT programs will present individual differences, which are believed to contribute to the development of mental health problems. The

aims of this research are to investigate differences between personality traits and the expression of symptoms in social phobia; the relation of individual differences and treatment outcome; and whether there are specific subtypes of social fears. An overview of the study will be presented.

Keywords: *social phobia, individual differences, personality traits, cognitive behavioural therapy*

Personality and symptom factors relevant to continuance in psychoanalytic psychotherapy

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The aim of the study was to establish whether patient personality factors or symptomatology were related to patients continuing until the end of a time limited psychoanalytic psychotherapy. Fifty three patients eligible for subsidized psychotherapy at an outpatient clinic were assessed at intake with the NEO-FFI personality inventory and the Brief Symptom Inventory. Statistical analysis compared those who continued until the end of a time limited therapy with those who discontinued. No association was found between the personality or symptom inventory results and continuance in psychotherapy. However, a number of interesting results outside the original hypothesis came to light during the statistical analysis. There was an important difference in the study group's personality scores as compared to the scores of clinical populations reported in the research literature. Most research which used the NEO as a measure in clinical groups reported significantly raised Neuroticism scores when compared to standardised scores. The other four personality domain scores generally remained within the standardised range. In contrast, within this patient group, NEO scores for all five personality domains were significantly different to standardised scores. Patients in this group exhibited significantly higher Neuroticism, and

lower Extraversion, Openness, Agreeableness and Conscientiousness when compared to standardised scores. In addition, males recorded significantly higher rates of symptomatology than females. Finally, this population recorded a much higher continuance rate than that generally recorded in the literature. Within this population there was no association between personality factors, symptomatology and continuance in psychoanalytic psychotherapy. The population achieved a much higher continuance rate than is commonly reported in the research literature. Contributors to the latter effect might include the intake process operating as a screen to select for those patients more likely to continue. In addition, there may be some aspect of the therapy provided by the clinic which enables patients to continue engagement in psychotherapy.

Keywords: *personality factors, psychoanalytic psychotherapy, symptomatology, continuance in psychoanalytic psychotherapy, patients*

Personality assessment inventory (PAI) profiles for WorkCover claimants with chronic pain

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The aim of this study was to describe features of personality disturbance that arise commonly in WorkCover claimants with chronic pain, and that need to be addressed in psychological therapy for successful return to work. Successive clients referred to a community psychological therapy clinic were administered the Personality Assessment Inventory (PAI). A mean profile will be reported with severe scores identified. A large proportion of clients obtained severe scores on up to 14 of the 31 scales of the PAI. It is concluded that WorkCover clients with chronic pain have complex personality presentations, and that consistent patterns can be identified using the PAI. Therapists need to be prepared to address a range of common issues if return to work is to succeed. As client issues are broader than cognitive and emotional issues, a therapeutic approach is required that is broader than traditional CBT.

Keywords: *WorkCover, personality assessment inventory, chronic pain, psychological therapy, return to work*

Personality characters and learning modes as the predictors of stress in university students

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No matter what age you are, if you are under stress it will affect your ability to learn, think and perform at your best. Severe stress releases chemicals in our brains and bodies that can hamper our performance and learning. Because stress is detrimental to our ability to learn, numerous scientists, educators and psychologists have worked hard to develop techniques, exercises and software programs that can help us dissolve it. How people react to stressors depends on the circumstances of each person's physical and psychological characteristics. So for better understanding of stress especially in the learning process, the study aimed to investigate personality characteristics (introversion-extroversion, intuition-sensing, thinking-feeling, perceiving-judging) based on Jungian personality types, and learning modes (concrete experience, abstract conceptualization, reflective observation, active experimentation) based on Kolb's experiential learning theory, and stress, in university students. A sample of 131 students were randomly selected from three universities. Hogan-Champagne's Personal Style Inventory (PSI), Kolb's Learning Style Inventory (LSI) and Coudron's Stress Inventory (CSI) were used. The data were analyzed with Pearson correlation coefficient. Analysis showed that in learning modes, there is a positive correlation between concrete experience and stress. In personality characters, there is a positive correlation between introversion and stress, and a negative correlation between extroversion and stress. Also, there is a positive correlation between concrete experience learning mode and extroversion and feeling. More analyses showed that across learning modes, males use the concrete experience mode more than females, and females use the abstract conceptualization mode more than males. To conclude, in regard to introverted individuals, such individuals are quiet, diligent at working alone, and socially

reserved, they make decisions somewhat independently of constraints and prodding by situations, culture, people, or things around them, and so facing stress factors interrupts their own world and reduces their function. In learning modes, people with concrete experience like new experience, rely on feeling and sensing, and generally find theoretical approaches to be unhelpful and prefer to treat each situation as a unique case. These factors cause variability in situations and circumstances and how stress comes about. The last finding is that students who believe themselves beyond who they are, and when facing problems beyond their ability, stress has more effects.

Keywords: *stress, learning, personality characteristics, learning modes*

Personalizing self-talk enhances athletic performance

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An athlete's performance can be affected, positively and negatively, by what and how they think (i.e. their self-talk). While there is evidence indicating that the words used for self-talk can impact performance, it is not clear if personalizing these words alters their effectiveness. In this study we investigated if personalised, as opposed to prescriptive or no, self-talk enhanced athletic performance as well as the athlete's perception of the effectiveness of this mental skill. We recruited Elite ($n=30$) and Novice ($n=30$) Taekwon-Do athletes from the International Taekwon-Do Foundation of New Zealand (ITFNZ). Athletes performed a 'side kick' against a mounted Adidas Electronic Body Protector (EBP) vest which measured the impact force of the kicks. To determine if self-talk influenced performance, athletes were compared over three self-talk conditions: baseline (no self-talk), prescribed (commonly used coaching words) or personalized (subject-by-subject words generated by a pre-performance interview). In addition to the quantitative EBP measure of kick force, athletes qualitatively rated their own performances following each trial. At the end of all trials athletes completed the Self-Talk Use Questionnaire (STUQ; Hardy et al. 2005) to

document their use of self-talk. For Elite athletes, the use of personalized self-talk enhanced performance (i.e. greater impact force of kicks) whereas prescribed self-talk was detrimental to performance. In contrast, Novice athletes performed better when using prescribed self-talk and worse when using personalized self-talk. Qualitatively, Elite athletes rated their overall performance as being better using personalized self-talk compared to no or prescribed self-talk. Novice athletes rated their overall performance as better using either personalized or prescribed self-talk compared to no self-talk. The STUQ data revealed that Elite and Novice athletes preferred to covertly use positively worded short phrases. The execution of an athletic skill (i.e. Taekwon-Do kick) was enhanced when athletes used self-talk words that were personalized to them. It was also found that athletes perceived their performance was enhanced when they used personalized (Elite) or personalized and prescribed (Novice) self-talk. To enhance the effectiveness of mental skills such as self-talk it is therefore important to personalize self-talk words to the athlete as they will be more meaningful and therefore more effective for the athlete. This is especially true for Elite athletes who have a better understanding of their sport and the execution of the skills required to be successful (i.e. they are often better able to formulate effective self-talk words for themselves). In comparison, Novice athletes may not be as aware of the subtle nuances of their skills and therefore require more prescribed self-talk words to help them with their performance. These findings demonstrate the benefit of an individualized approach to working with athletes in order to facilitate their awareness of what is required to successfully execute the skills of their sport and how the use of individualized self-talk words, rather than commonly used words and phrases, can more effectively enhance performance.

Keywords: *self-talk, athlete performance, elite athletes, novice athletes, taekwon-do*

Personification of artificial objects: Effects of animistic thinking on facial expression perception of cars

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Humans have developed an ability to gather different information from facial expressions. Windhager et al. (2008) examined the possibility of applying such facial expression perception to artificial objects. As a result, they found the impression for cars constituting two dimensions: 'Power' and 'Sociability'. Why do we recognize facial expression towards artificial objects? This study focuses on an animistic thinking and examines the relationship between the tendency of personifying artificial objects and the perception of facial expression of cars. Questionnaires were distributed to 257 university students in Japan. The main questions were as follows: 1) The impression evaluation of the car (Windhager et al., 2008) and 2) the animism scale (Ikeuchi, 2009). Towards the former, we selected three kinds of cars (BMW, VW, MARCH) and presented their photos to the respondents. We selected them because BMW, VW, and MARCH represented higher, middle, and lower power dimensions, respectively (Windhager et al., 2008). Then, the respondents were asked to rate against the items of car impression (e.g. friendly, angry) on a percentage scale (100%—strongly agree; 0%—Disagree). The results of factor analysis indicated the following: 1) The car impressions were made up of three factors ('Power', 'Sociability', and 'Instability') and 2) the animism scale constituted two factors ('Deification' and 'Personification'). ANOVA was conducted—the dependent variable was the score of car impression for each factor, and the independent variables were the personification tendency (high/low) and the model (three kinds). As a result, the main effect of the models was significant in all factors. In particular, 'Power' and 'Instability' of BMW were higher than that of other models, although it's 'Sociability' was lower. Besides, as compared to the low personification tendency group, the high group was more likely to regard cars on aspects of 'Sociability' and 'Instability'. The findings in the present study indicated that the result of Windhager et al. (2008) was reproduced in Japan and that an individual personification tendency strongly influenced the impression formation of the car, excluding the 'Power'. Because the factor of 'Instability' was extracted, it indicated

that Japanese people might be more sensitive to the state of emotion.

Keywords: *emotions, facial expression, animistic thinking, personifying artificial objects, Japan*

Pleasant stimuli from the International Affective Picture System (IAPS) may induce low-arousal states in volunteers

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The aim of this study was to present the standardization and comparison of the Brazilian norms of the International Affective Picture System (IAPS), an instrument of affective images widely used in research with the North-American norms (Study 1). A further aim was to confirm the existence of pleasant-relaxing pictures (not described in the original study of IAPS) by physiological measures (Study 2). Study 1, the standardization of IAPS for Brazil, was performed with 1,510 Brazilian university students (543 males), who rated 936 visual stimuli for valence, arousal, and dominance following the methodology of the original study. Data of Brazilian and North-American samples were compared through Pearson product moment correlation (level of significance: 5%). Study 2 involved 24 volunteers (12 males) who were recruited for individual sessions in which they viewed a set of 40 IAPS stimuli selected on the basis of valence and arousal normative means. During slide viewing, physiological data (heart rate, skin conductance, peripheral temperature, corrugator and zygomatic electromyography activity) were recorded and the subjects evaluated each picture in terms of pleasure and arousal. The physiological scores for each stimulus were calculated and responses between emotional categories were compared by ANOVA. In Study 1 the correlations between Brazilian and North-American norms were significant. The correlations were higher for valence, followed by dominance and lastly by arousal ($r = 0.95$; 0.88 and 0.64 , respectively). Unlike North-Americans, Brazilians described

some pleasant pictures as low-arousing, and there was a high negative correlation between pleasure and arousal dimensions ($r=-0.84$), whereas this correlation was much lower in the original standards ($r=-0.27$). To confirm these observations Study 2 provided evidence of physiological relaxing induced by low-arousal pleasant pictures. Pleasant-relaxing pictures elicited greater zygomatic muscle activity when compared to pleasant arousing [$F(3,69)=6.39$, $p<0.001$]. There were found to be great similarities between Brazilian and North-American norms for IAPS, however, the original study was based on a unipolar arousal scale and considered all pleasant stimuli as arousing, whereas our standardization detected the existence of pleasant-relaxing pictures and proved their validity through physiological evidence. Our findings suggest that a re-interpretation of the affective space of valence and arousal, based on a bipolar arousal scale, may provide a more accurate emotional assessment.

Keywords: *International Affective Picture System (IAPS), arousal state, pleasant stimuli, physiological measures, bipolar arousal scale*

Political consciousness of Japanese adolescents after the democratic change of government

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For the first time in postwar Japan, the Democratic Party won a majority of seats in August 2009 and a change of government happened as a result of an election. Opinion polls conducted before the election showed that most Japanese had low political interest and passive political involvement. However, in the last few elections for the House of Representatives, voter turnout has been high, with either the Liberal Democratic Party (LDP) or the Democratic Party (DP) gaining the largest number of seats. The voting behavior of Japanese adolescents was analyzed from the perspective of political consciousness and fashion. A survey of Japanese adolescents ($n = 387$) was conducted in September 2009 after the change of government, using a questionnaire that inquired about voting behavior, political

interests, frequency of political conversations, political knowledge, level of excitement about the election, apathy regarding the election, sensation seeking scale and the frequency of pro-social behaviors. Voting behavior of respondents were DP voters (11.6%), LDP voters (13.0%), other voters (9.3%), nonvoters (19.3%), no constituency (46.8%). Results of a one-way analysis of variance by voting behavior indicated that LDP voters had higher political interest than nonvoters ($F(4,370)=5.30$, $p<.05$), and higher political knowledge than other voters, nonvoters and no constituency ($F(4,373)=7.61$, $p<.05$). LDP and DP voters had more frequent political conversations than nonvoters and no constituency ($F(4,366)=6.31$, $p<.05$). Moreover, DP voters were more excited about the election than others ($F(4,371)=5.27$, $p<.05$). Other voters felt more apathy about the election than no constituency ($F(4,370)=3.95$, $p<.05$). It is suggested that adolescents who become temporarily excited about the expectation of a change of government showed a trend towards supporting the DP. At the same time, LDP lost the election because they had little support among adolescents, who felt apathetic about the election.

Keywords: *political consciousness, Japanese, change of government, election, voters*

Positive emotion regulation: An ERP study

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Using the event-related potential (ERP) measurement, the present study investigated the impact of cognitive reappraisal strategies (enhancing and decreasing) on positive emotion regulation (ER) and subsequent cognitive task. Sixteen young native Chinese-speakers (6 males, 10 females) participated in the study. In each trial a positive picture was firstly presented on the screen and participants were asked to normal view or regulate emotions (enhance or decrease). An emotional word was then presented and participants were asked to judge the pleasantness of the word. ERPs were recorded from 64 scalp electrodes. ERP results

during ER period indicated that the amplitude of LPP (300-800ms) was larger under cognitive reappraisal conditions than under the viewing condition, and the amplitude of LPP was larger at enhancing condition than at decreasing condition. During valence decision, behavioral results showed that reaction times (RTs) were longer at decreasing condition than at enhancing condition, and longer at enhancing condition than at viewing condition. In the meantime, ERP results indicated that amplitudes of N400 (320-430ms) and P300 (450-720ms) evoked by emotional words were modulated by different cognitive reappraisal strategies. Specifically, N400 amplitudes were larger in response to words presented after participants reappraised pleasant emotions than after participants only viewed pictures. The N400 difference between enhancing condition and decreasing condition was marginally significant. In addition, P300 amplitudes were smaller in response to words presented after enhancing or decreasing a pleasant emotion relative to maintaining that emotion. Our results suggested that cognitive reappraisal strategies were effective for positive emotion regulation. More cognitive resources were needed when participants reappraised pleasant emotions.

Keywords: *event-related potential, cognitive reappraisal strategies, positive emotion, cognitive task*

Positive illusions of social competence in girls with and without ADHD

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Self-concept and self-appraisals are at the foundation of mental health. This project aims to examine how girls with attention-deficit/hyperactivity disorder (ADHD), who are at risk for low self-concept, view their social abilities relative to parent and teacher report, and relative to research assistant ratings of their performance during a social laboratory task. A secondary aim was to test if these over-estimates were related to psychosocial well-being. We compared social self-competence ratings in girls with ($n=42$) versus without ($n=40$) ADHD, relative to ratings of the girls' social competence made by mothers, teachers, and

blind raters (research assistants) during a social laboratory task. We also gathered measures of psychosocial functioning. Although both groups of girls over-estimated their social competence relative to all indices (mothers, teachers, and research assistant ratings), girls with ADHD grossly over-estimated their competence. When over-estimates were correlated with measures of psychosocial well-being, a different pattern of results emerged for each group. For girls with ADHD, over-estimates were positively related to maladjustment (e.g., aggression) and negatively related to adjustment (e.g., number of friends). For girls without ADHD, over-estimates were positively related to adjustment. Overall, results suggest that over-estimates of competence function differently in girls with and without ADHD. For girls without ADHD, the often-cited notion that over-estimating one's performance is adaptive, first made popular by Taylor & Brown (1988), appears to be supported. However, for girls with ADHD, the opposite appears to be true: in this case, the view that these illusions are maladaptive, and that accuracy in self judgment is the cornerstone of mental health may be more appropriate.

Keywords: *Attention Deficit Hyperactivity Disorder, social competence, psychosocial well-being, self-concept*

Positive psychological resources and student well-being: Optimism, emotional support, and promoting positive outcomes

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Post-secondary students, particularly those who are adjusting to the transition from high school to university or college, face a great deal of stress in their daily lives. However, positive psychological resources such as optimism and emotional support can help to mitigate negative outcomes and promote positive ones. This study explores the relation between optimism and emotional support, and how these two resources act together to promote psychological well-being in students. Specifically, the relation between optimism, emotional support, and feelings of vigor, a factor associated with psychological well-being, will be examined, as

well as the relation between optimism, emotional support, and depression. Data were collected at two time points in an internet study of student well-being. 68 first-year university students filled out an online questionnaire at the beginning of the fall semester, and again 6 to 8 weeks later. Variables measured included optimism, emotional support, vigor, and depression. Mediation analysis was used to examine the relation between optimism at Time 1, emotional support at Time 2, and vigor at Time 2, as well as the relation between optimism at Time 1, emotional support at Time 2, and depression at Time 2. Mediation analysis indicated that the relation between optimism and vigor was fully mediated by emotional support. Similarly, the relation between optimism and depression was fully mediated by emotional support. Additional regressions are reported that support the mediating role of emotional support on both vigor and depression. Taken together, the results of this study support a step by step process wherein optimism's effects on both a positive and a negative outcome are fully mediated by emotional support. Theoretical and practical implications are discussed, including the importance of these findings in developing interventions to increase student well-being.

Keywords: *students, well-being, optimism, emotional support*

Post-traumatic stress and social processes: A contextual action perspective

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The paper aims to use a contextual action theory perspective to explore the social processes involved in post-traumatic stress disorder (PTSD). Social processes are at the basis of the formation of the diagnosis of PTSD and its inclusion in the third edition of the DSM (DSM-III; American Psychiatric Association, 1980). The foundation of the PTSD diagnosis highlights contextual and social construction processes (McNally, 2004). Based on the notion that people make sense of their own and other people's behaviour as goal directed, Contextual

Action Theory adapts the perspective that actions have social, personal, and intentional context and relevance; they have a beginning and end, and cluster in such a way that they organize goals (Young and Vaach, in press). In this paper action theory is used to conceptualize a case study that shows the goals, actions and social processes of a combat veteran's experience with PTSD (Young, Valach, & Collin, 2002). Results describe pre-trauma, post-trauma, and post-therapy social processes of a combat veteran's experience with PTSD. Using action theory, the paper provides a fuller account of the meaning and purposes of the goals and actions of a veteran with PTSD. For example, over the course of the development and treatment of PTSD, goals change from pre-trauma, "enjoying and caring for his family" to post-trauma, "getting through or surviving the next day ... or even hour" to post-therapy, giving and receiving help with PTSD to other veterans and building better relationships with his family. When an action theory perspective is applied to a veteran suffering from PTSD, it provides a powerful illuminator of the social processes that characterize the disorder. Knowing more about the deeper purposes and the social process that underline PTSD helps clinicians understand and treat the symptomatic behavior of veterans who suffer from PTSD.

Keywords: *Post-traumatic stress disorder, social processes, contextual action theory, veteran, DSM-III*

Powerful effects of media on emotion-cognitions: Implications for mental health

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The aim of the current study was to investigate if laboratory (Study 1) or personally traumatic events (Study 2) cause qualitative differences in affect, cognition and arousal. In a 3x2 factorial design, a between subjects comparison of the type of depression (non-depressed $n=30$, induced depressed $n=30$ and depressed $n=30$), and a within subjects comparison of the type of information (central vs. peripheral detail), were made for affect, arousal, memory, and Retrospective Time Estimation in response to a traumatic film clip in Study 1; and to a personally

traumatic event in Study 2. In study 1 the induced depressed group felt significantly more distressed, angry, and aroused after viewing the clip as compared to the depressed and non-depressed group. The depressed group felt more angry and fearful compared to the non-depressed group; and the non-depressed group felt more distressed than the depressed group. The depressed group had better recognition memory and estimation of time as compared to the non-depressed and induced depressed groups. In Study 2 the induced depressed group felt significantly more distressed, angry, inactive, and aroused, and had better memory for central rather than peripheral details after recalling the personally traumatic event, as compared to the depressed and non-depressed groups. The depressed group felt more angry and fearful compared to the non-depressed group. There are significant differences in the way depressed and induced depressed groups respond to film and personally traumatic events. The emotion-cognitions mediate special processing patterns whereby similarly toned resources are enhanced and elaborated, in line with the mood-congruency hypothesis (Bower,1981), with a limited focus creating tunnel memory (Safer et al.1998) and enhancing memory for central details. Therefore, the laboratory setting leads to similar differences in emotions, cognitions as personally traumatic events. The theory of emotion-cognitions proposed here explains the complex interaction between the traumatic event, the type of information, the reactions and the experienced affect. This study provides valuable insights into the significant role of media depictions in the etiology of depression and its prevention.

Keywords: *media, emo-cognition, trauma, depression, memory*

Predicting adolescent intentions to use sun protection: Extending the Theory of Planned Behaviour

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Compared to all other age groups, adolescents are often cited as having poor compliance for adopting sun-safe behaviours. This is disconcerting because adolescent skin is more

sensitive to the effects of ultraviolet radiation thus, posing a significant risk of developing skin cancer in later life. The theory of planned behaviour (TPB) is a comprehensive model that is widely used to explore the underlying influential factors behind behaviours and intentions. Its application toward sun protection, however, is limited, especially within the area of adolescent sun protection. Given this, the aim of this present study was to examine the sun protective intentions of adolescents, using the TPB, whilst expanding the model to incorporate additional influences that have been known to affect the adoption of sun preventative behaviours. Participants comprised of 102 adolescents, aged between 11 and 18 years who were recruited through West Australian schools and convenience sampling. A self-report sun survey, which was based on the standardised TPB methodology, was used to assess the influence of attitudes toward sun protection, subjective norms and perceived behavioural control upon intentions to use sun protection. Additional predictors of unrealistic optimism, descriptive norms, skin type, and age were used to extend the TPB framework. Regression analyses revealed that the TPB predicted 50% of the variance in intentions to use sun protection. With the inclusion of the additional variables the model was able to account for significantly more of the variance (59%) in intentions to use sun protection. Regression analyses, however, revealed that of the additional predictor variables, only age and unrealistic optimism made significant, unique contributions to predicting variance in sun-protective intentions. Attitudes toward sun protection, subjective norms, and unexpectedly, unrealistic optimism were associated with greater intentions to use sun protection. Age was negatively associated with intentions, such that older age was related with lower intentions to use sun protection. The results from this study validate the use of additional variables within the TPB to predict adolescent sun protection, in particular emphasising how unrealistic optimism, age and subjective norms can affect adolescent intentions to protect themselves from the sun.

Keywords: *adolescents, sun-safe behaviours, theory of planned behaviour, attitudes, intention*

Predicting effects of achievement motivations on positive and negative test emotions

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This study aims to analyze and compare the differential predicting effects of achievement motivations on positive and negative test emotions. 310 high-school students (122 male and 188 female) from 3 high schools in Taipei were sampled. These students were administered the scales before and after a math test. The prediction variables in the achievement motivation scales are subjective competence (self-efficiency, task difficulty & success expectation), implicit self-theories (entity & incremental theorists), test meaning (threaten & challenge), and self-consciousness (affection-reflection, appearance-impression & social anxiety). The outcome variables are positive and negative emotions. Hierarchical regression analysis was adopted for statistical methods. Results revealed (a) the explaining variation of prediction effects reached 49.2% - 68.9%, thus it indicated those motivations were intently related to both positive and negative test emotions; (b) that self-efficiency, success expectation, and test meaning of challenge all significantly predict positive test emotion, except implicit self-theories; and (c) task difficulty, implicit self-theories of entity theorists, test meaning of threaten, appearance-impression, and social anxiety significantly predict negative test emotion. To conclude, compared to negative test emotion, positive test emotion is less affected by implicit self-theories and self-consciousness. Corresponding to motivation theories, the results mostly verify our hypotheses. The mechanistic process in which self-consciousness affects negative test emotion, as well as the method for mitigating negative test emotion through cognitive regulation about the test, are worth further exploration.

Keywords: *achievement motivation, test emotion, implicit self theories, self-consciousness*

Predicting intention of hearing parents to communicate with their deaf child in sign language: An application of the theory of planned behaviour

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When a deaf child is born to hearing parents, one of the most challenging decisions to be made is the mode of communication they will use with that child. There is considerable contention as to whether sign language should be used, or whether the child should be forced into lip-reading and orality. The mode of communication selected has profound effects on the deaf child's cognitive and social development. The present study utilized Ajzen's (1985) Theory of Planned Behaviour (TpB) to investigate the factors influencing hearing parents' intention to communicate with their deaf child through the use of sign language. The model proposes that intentions strongly predict behaviour, and intentions are influenced by attitudes, perceived subjective norms and perceived behavioural control. A questionnaire was constructed using the TpB template (Ajzen, 2002). In addition to the usual constructs, a stigma measure was included. A sample of 112 hearing parents with deaf children completed this questionnaire. The results were analysed using multiple linear regression. The results indicated that attitudes, perceived behavioural control and stigma contributed to the prediction of hearing parents' intentions. Contrary to the theory, subjective norms did not provide a significant contribution to the prediction of intention. Attitude emerged as the strongest significant predictor of intention, followed by perceived behavioural control and then stigma. Additional analyses revealed that attitudes and perceived behavioural control were not significantly predicted by their respective belief-based measures. Parents' intentions to use sign language as the primary mode of communication is primarily determined by the attitude to sign language and the extent to which they perceived deafness as a stigma. Their beliefs about their capacity to learn sign language is also a determining factor.

Keywords: *deaf child, communication, sign language, theory of planned behaviour, deafness*

Predictive measures of sales performance: A validation study of test outcomes and manager ratings

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The aim of this research was to conduct a validation of a 'narrow band' measure of job performance used within sales environments. It was hypothesised that this measure would be a valid predictor of sales specific job performance, but not of broader overall job performance or corporate citizenship. Fourteen managers of financial planners from within a large Australian financial services organisation participated in the study. They were required to complete an online performance rating survey designed to capture manager ratings of employee performance from both a sales and corporate citizenship context for a number of their selected employees. Rating surveys were numerically coded and then paired with the matching employee's assessment results. These were then analysed accordingly. A chi-square test of independence determined that the 'narrow band' measure was a valid predictor of sales specific performance and of broader overall job performance, but not of broader corporate citizenship. An overall accuracy level of 66.6% in predicting sales performance; 66.6% in predicting overall job performance; and 58.3% in predicting corporate citizenship behaviours was also determined. When assessed across three different competency settings, this 'narrow band' measure was found to be a good predictor of future job performance across sales specific and overall job performance, but not of corporate citizenship behaviours. This is largely consistent with the body of research. However, the significant relationship between high assessment scores and high overall job performance ratings was not expected, indicating that this tool is not only good at predicting high performers when measured against narrow criteria, but also in predicting broader criterion such as overall job performance.

Keywords: *sales performance, predictive measures, validation, test outcomes, job performance*

Predictors of suicidal behaviour in mental health patients

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Predicting suicidal behaviour is a complex multidimensional venture in mental health and public health settings. Mental illness is known to carry a higher risk of suicide and suicide attempt in comparison with the general population. The study aims to identify potential characteristics common to parasuicidal mental health patients and provide the clinician with useful information to better understand and modulate suicidal behaviours. Data was collected from 96 mental health patients with recent history of suicide attempt and were suicidal (as measured by the Beck Scale for Suicidal Ideation, BSS) at the time of the study. The participants completed questionnaire measures of hopelessness, temporal orientation, self-efficacy, neuroticism, pain intensity and problem-solving confidence. Fourteen potential predictors were identified. The 14 variables predicted 43.8% of the variance of the BSS. However, only four of the predictor variables (hopelessness, number of suicide attempts, time incompetence, and pain intensity) contributed to most of the variance. Hopelessness and number of attempts showed the strongest predictive value. Two hypothetical frameworks namely Beck's Cognitive Sensitization model and Solomon's Opponent Process theory were considered in explaining the results.

Keywords: *suicidal behaviour, suicide, Beck Scale for Suicidal Ideation, cognitive sensitization model, opponent process theory*

Preference of background texture in reading sentences with a computer monitor

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When we read sentences on computer monitors or video display terminals, the background of the sentences are usually plain, noiseless white. On the other hand, in paper-based reading, the backgrounds of sentences are noisy to some extent. In this study, the effect of background-noise on the evaluation of readers with computer monitors was examined. Participants read part of a Japanese novel presented on a computer monitor with four background conditions: background with no noise (i.e., plain), with rough texture, with middle texture and with fine texture. The texture was made

with Photoshop based on Japanese paper. Average luminance of the monitor was controlled. The stimuli (i.e., part of a novel) were presented on the computer monitor with the standard format of Japanese paperback. One display corresponded to one page, and one of the background conditions was assigned to each display. Thus, a trial consisted of four displays. The participants were instructed to read sentences at their own pace. When they had finish reading a display, they were asked to evaluate their impression of the display as a whole on a rating scale. A five-point SD scale was used with ten items: flat, calm, comfortable, stable, visible, readable, inexhaustible, plain, natural, and clean. When the participants finished the evaluation and clicked a button, the next display was presented with another background. The order of background conditions was counter-balanced between participants. The results of the experiment show that evaluations were higher in the fine-texture condition than in the no-texture condition in some items. That is, the fine-texture condition was evaluated as being more visible, readable and inexhaustible than the no-texture condition. On the other hand, as there were large differences between participants, the individual difference of preference was suggested. In conclusion, there is the possibility of improving readability by purposely adding some noise to background texture.

Keywords: *computer monitor, background texture, reading, preference of background texture, background noise*

Prevalence and predictors of persistent cognitive decline in older hospitalised patients: A six-month follow-up study

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Cognitive decline occurs in 16-35.5% of older hospitalised patients, but this decline may be persistent rather than transient. Distinguishing persistent from transient cognitive decline is clinically useful. The aim of this study was to determine the prevalence and predictors of persistent and transient cognitive decline in older hospitalised patients over six months after hospital discharge. For this prospective cohort study, 291 older patients were recruited from

five medical and surgical units at a tertiary medical centre in Taiwan. Patients were assessed for cognitive status by scores on the Mini-Mental State Examination at admission, discharge, three and six months post-discharge. Persistent cognitive decline was defined as continuing score reduction and >3 point reduction six months post-discharge. Transient decline was defined as >3-point reduction at some stage, with a total decline <3 points six months post-discharge. The cognitive status of the majority of subjects (57.4%, $n=167$) decreased >3-point during follow-up. Of these decliners, 59 (35.3%) had persistent cognitive decline, with an average 5.32-point reduction six months post-discharge. Forty-six (27.5%) patients experienced transient cognitive decline. After multiple adjustments in logistic regression analysis, persistent decline was predicted by no in-hospital functional decline ($OR=0.16$, $p=0.002$), more re-admissions after discharge ($OR=2.42$, $p=0.020$), and older age ($OR=1.09$, $p=0.048$). Over half the sample experienced significant cognitive decline following hospitalisation, with more than 35% of this decline being persistent. Identified predictors suggest the need for a new perspective in discharge planning on patients at risk for persistent cognitive decline.

Keywords: *persistent cognitive decline, transient cognitive decline, older hospitalised patients, predictors, Taiwan*

Preventing burnout: Therapeutic approaches that safeguard both client and clinician from (re)traumatization when working with developmental trauma

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The numerous risks for re-traumatization of clients and vicarious traumatization of clinicians are extremely important to consider when working therapeutically on posttraumatic issues, particularly difficulties resulting from ongoing developmental trauma. Vicarious traumatization of clinicians may inhibit therapeutic effectiveness and contribute to burnout. This

paper addresses issues within the treatment of trauma-related disorders that may put therapists at risk for both vicarious traumatization and burnout. Moreover, current theoretical perspectives on trauma-related disorders will be discussed and practical tools for managing the posttraumatic responses of severely traumatized clients (while also protecting the clinician) will be described. For example, the theory of mentalization (Fonagy, Gergely, Jurist & Target, 2004) offers a helpful attachment-based orientation toward disorders emerging from ongoing developmental trauma (e.g. borderline personality disorder) while providing specific ways of working with the client around managing overwhelming affect. In a similar way, using the specialized tools within mentalizing-based practice (e.g. marked mirroring) may prove not only therapeutic for clients, but may also increase healthy differentiation of the clinician on a neurological level (e.g. mirror neurons), where vicarious traumatization is thought to occur (Rothschild, 2000). Additional theories and practical tools will be discussed, using case examples, as well as ways with which to integrate them into existing clinical approaches.

Keywords: *trauma, burnout, post-traumatic stress, therapy*

Profiling academically engaged and disengaged students using personal investment theory

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Personal investment theory is concerned with how persons choose to invest their energy in particular activities, and designates three basic components of meaning as central to understanding this personal investment: sense of self, perceived goals of behavior, and facilitating conditions (Maehr & Braskamp, 1986). Personal investment theory may shed light on why some students are engaged or disengaged from the school experience. Academic engagement has been posited as an important multifaceted construct that involves cognitive, behavioral, and emotional components. The aim of this research was to

investigate how the different components of personal investment theory are related to academic engagement. 323 Filipino secondary school students were given questionnaires that assessed their academic engagement (cognitive, behavioral, and emotional), sense of self, facilitating conditions, and goal orientations. Correlations were obtained to examine the relationships among the variables. In an effort to determine whether the qualities associated with academic engagement as revealed by correlational analyses involving the whole sample were truly characteristic of highly academically engaged (or disengaged) individuals, a discriminant analysis was conducted focusing on students scoring particularly high or low in academic engagement. Specifically, high and low engagement students were required to have scores at least one standard deviation above or below the mean for the academic engagement composite variable. 49 students with high academic engagement and 59 students with low academic engagement were identified. Results indicated that the different components of personal investment theory successfully discriminated between the high and low academic engagement groups. Students who exhibited high academic engagement had higher scores for the positive sense of self scales (positive academic self-esteem, sense of purpose for schooling, self-reliance), higher scores for positive facilitating conditions (positive parental support, teacher support, and positive peer influence), and higher scores for academic goals (mastery goals, performance goals, and social goals). Performance avoidance goals and negative academic self-esteem failed to discriminate among the two groups. The different components of personal investment theory can shed light on why some students are engaged while others are disengaged from the school experience thus offering a more complex picture of the reasons behind engagement and disengagement.

Keywords: *personal investment theory, sense of self, goal orientation, academic engagement*

Psychodynamics and the giving of the Ignatian spiritual exercises in Australia

SAUNDERS, P. (Monash University)

This research aims to examine the understanding and use of psychodynamics processes of spiritual directors in the giving of the Ignatian Spiritual Exercises. It aims to develop a deeper appreciation of the relationship between psychoanalytic processes and the giving of the Exercises through the experience of the director. It is hoped that results will inform the formation of directors of the Exercises in the future. This qualitative research is in progress and is using semi-structured in depth interviews. To date, 15 have been conducted. Of the 15 spiritual directors interviewed, 9 were Jesuit priests, 1 religious woman, 2 laymen, and 3 laywomen, with ages ranging between 50 and 90 years. Some received the Exercises as a preached 30-day retreat, some as a directed 30-day retreat and some as a 30 week directed retreat. Most had no formal training to become directors, learning as an apprentice with a supervisor. Others since 1999 have been trained through the Arrupe formation program. Most have had little or no psychology training and most had no experience of counseling or therapy. There were very different views expressed about the place of psychological processes in the giving of the Exercises. The data at this stage suggests that there is little conceptual understanding of psychodynamic processes at work by the directors in the giving of the Spiritual Exercises. Most had little knowledge of psychodynamic concepts, yet most have implicitly used psychodynamics, in an operational sense, in the way they have engaged in the relationship with their exercitants in the giving of the Exercises. The way in which the directors received the Exercises and were formed to give them seems to influence their openness to psychodynamic processes. There is room for improvement in the way directors are formed to give the Exercises to be more aware of the psychodynamics involved in the intimate relationship that occurs between the director and the exercitant in the giving of the Exercises. A very interesting 'oral history' component is emerging in this long-term research.

Keywords: *Ignatian spiritual exercises, psychoanalytic processes, Jesuit priests, religious, Australia*

Psychological and emotional effects of intensive care and emergency department nursing

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Compassion fatigue, secondary traumatic stress and vicarious traumatisation have been found amongst helping professions, as a result of the caring nature of the work and the worker's level of engagement with traumatised people. Currently, there is a dearth of empirical research exploring these models of helper distress amongst critical care nurses. The aim of this study was to investigate these three models of helper distress amongst a sample of Australian nurses working in an emergency department and intensive care unit. Perceived levels of social support were also investigated in order to ascertain if it provided any buffering to helper distress. Participants were gathered from nurses working in Intensive Care and Emergency Departments at a local metropolitan based hospital serving the city of Adelaide, South Australia. Nurses were asked to complete a demographic questionnaire, the Professional Quality of Life Scale Compassion Satisfaction and Fatigue Subscales (R-IV), the World Assumptions Scale and the Multidimensional Scale of Perceived Social Support. Out of 153 participants 29.4% had elevated compassion fatigue/secondary traumatic stress scores in the clinical range. Benevolence was found to be predictive of compassion fatigue/secondary traumatic stress, burnout and compassion satisfaction levels. Lack of support from a significant other was found to be an important factor for burnout and poor self-worth was predictive of compassion fatigue. Finally, younger age was predictive of compassion fatigue/secondary trauma. There is a need to further explore these models of distress in general and specialised areas of nursing. Education about the effect of working in such a unique role and accessible support services should be available to critical care nurses.

Keywords: *helper distress, critical care nursing, social support*

Psychological automatism, depression and experience line: Three ways to understand the meanings of an injury in the sport arena

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Between peak performances and painful experiences, embedded injuries and excessive behaviors, sporting fields are territories where a comprehensive psychology appears, where a border-line can meet the pain, where an injury can meet some structural dissociation, and where a sportsman or a sportswoman discovers what a real human being he or she is. The first purpose of this presentation will be to explore steps which allow an injured sportsman to discover - through a meaningful way of life - what lies beyond the blackness of a traumatic event. The second purpose of the presentation will be to answer to the question "how does an injury provoked by an intensive sports practice allow the wounded to encounter their real-self and to restart an authentic dialogue with his or her cultural environment?" Three concepts will be explored: 1) Border Line, from which we will discover the meanings of no-limit, loneliness and Hilflosigkeit in the sport arena; 2) Psychological Automatism, from which we will discover the necessity for a sportsman to adapt his abilities to an uncertain environment; and 3) Structural Dissociation, from which we will discover how an injury reveals some hidden dissociative parts of a personality. In conclusion we will demonstrate how a deeper integration of body and mind emerges through an injury and how healing requires accessing the wisdom behind the wound.

Keywords: *psychological automatism, structural dissociation, border line, injury, sport*

Psychological foundation of sex education from the point of Quran and Hadith and its effect on developing sex education programs

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The aim of the present study is to explain the psychological foundation of sex education in

Islam and its impact on the procedures of teaching individuals to overcome difficulties in this area. The study consists of description and analysis of verses and hadiths related to human needs, tendencies, capabilities and sexual behaviors. It also includes the anthropological foundation and understanding of sexual behaviors that affect the sexual learning process. The results indicated firstly that human sexual tendency and relationships between men and women is completely natural and pure. Secondly, that sexual instinct accompanied by other instincts like kindness, intimacy, affinity, connecting other's, liking beauty and the tendency towards spiritual beauty constitute a unique structure in human beings. Therefore, sexual instinct is not an animal instinct, but a human-like one. And thirdly, that moderate sexual satisfaction provides characteristic, ethical and intellectual development and leads the human to prosperity in the next world. In conclusion, a sacred outlook towards the regulated sexual relationship can promote people's characteristic disposition. Through sexual learning, it is essential to develop the sense of being natural about sexual tendency, the necessity of regulated sexual satisfaction, chastity, modesty, cooperation between men and women, developing intimacy and affinity morale, promoting the kindness and friendship and other cognitive, emotional and behavioral skills that all must be considered.

Keywords: *psychological foundation, sexual learning, sexual training, sexual instinct*

Psychological influence on conflict interaction in an administrative team

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Conflict management includes ways of influencing a person or a group of people with the aim of restructuring and developing effective interpersonal interactions. The influence is directed at changing the other person; his aims, assessment, and positions, in the course of interacting with him. The research objective of this study lay in determining the psychological influence types which provide success in solving

conflict interactions in an organization. The methods used were a free self-description questionnaire and a multiple-factor personality determination technique by R. Cattell. Communicative personal potential of influence, which provides the success in solving conflict interaction, is realized through basic and compensatory types. Basic types of influence include social intellect, personal magnetism, frustrating influence and trusted partnership type. It was determined that compensatory types of influence involve manipulative adaptability, militant virtue, responsibility and competence. The success of psychological influence on conflict interaction of personnel is provided by totality of sociocultural and creative characteristics of the manager's personality in an organization. It has been empirically established that positive perception of other personalities is typical for social intellect and high adaptability and self-confidence is typical for personal magnetism. The frustrating type of influence implies tension and discomfort and trusted partnership type is characteristic of emphatic and altruistic people with underestimated self-esteem. Manipulative adaptability implies the presence of flexibility and persistence. Militant virtue is characteristic of authoritarian personalities with high moral aims but with low reflexion. Responsibility and competence of influence are provided by high intellect and professional reliability. Thus, at the heart of conflict management in an organization lays the coordination of a manager's ways of influence on personnel usage.

Keywords: *conflict management, psychological influence, social intellect, organisation, personality*

Psychological reaction to role playing games for medical safety - Educational effect of multitask games

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Role playing games are often useful in risk evaluation and multicultural exchange. We applied the games to medical safety training. Assuming medical scenes, the games were designed for players to perform in a short time with simultaneous multitasks to introduce error factors. Psychological reaction of the players was

measured in roles of both nurses and patients who experience difficulties. 24 second-year student nurses were recruited to play the games in the A university, August, 2009. The accuracy in delivering medicine was measured, along with change in evaluation before and after playing games, and impressions survey on games in view of each role to improve in practical applications and educational effects. Three nurse players performed separate tasks, and received reports from other nurses while they suspended the tasks. Patient players gave questions, requests and anxieties to intervene the tasks. In delivering medicine, errors were often found in sorts and quantities of the medicine, where only one group completed the task successfully. Evaluation change in before and after the games was investigated on 43 items. The highest score was found in difficulty to take over others task. The second highest was that there might be some errors left unnoticed, and that the task finished with others does not guarantee the accuracy. 25 other items was also found to increase scores after the game. Several interesting opinions were found in describing "What you learned in the game", including: "Intervening from others while performing a task disturbs nurses to respond to patients appeal"; "To make a note is important to complete accurate procedures after suspending tasks"; "Nurse players felt impatience and became nervous"; "Even if when there is a shortage of time, it is important to perform slowly and accurately". Multitask games can be designed to closely simulate actual medical scenes in hospitals, and make players experience and realize the seriousness of errors and the sequence of incidents. In particular, the games have a great impact on awareness, reaction and emotion of players, and it is quite effective in medical safety training.

Keywords: *role playing, risk evaluation, medical safety, Multitasking*

Psychometric properties of the strength assessment inventory

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The Strengths Assessment Inventory (SAI) is a novel measure that assesses a broad range of psychosocial strengths in children and adolescents. The purpose of this research was to ascertain the psychometric properties of the SAI. Data was collected from 572 school-aged youths between the ages of 9 and 18. Reliability of the instrument was assessed using measures of internal consistency and test-retest reliability. Construct validity was assessed through factor analytic techniques and inter-scale correlations. Convergent and divergent validity was assessed through correlations between measures of strengths, self-concept, and psychopathology. Overall, the SAI-Y displayed intermediate to high levels of internal consistency, indicating that it is a reliable measure. Additional support for this proposition was demonstrated by the adequate-to-good test-retest reliability coefficients. Factor analysis and inter-scale correlations indicate that the measure has an acceptable level of construct validity. In addition, correlations between the SAI and other measures were all in the expected direction. Collectively, results from this study provide evidence that the SAI has desirable psychometric properties. The measure can be used in assessment and treatment that integrates positive aspects of functioning of children and adolescents.

Keywords: The Strengths Assessment Inventory, psychometric properties, reliability, validity, assessment

Psychopathological disorders in adolescence: A dimensional and psychological approach

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Psychopathological disorders in adolescence are often associated with conduct problems in adulthood (violence, substance abuse or dependence, suicide). For a long time, their treatment has been a real public health issue. Several researches have dealt with the impact of psychiatric comorbidity on the severity of

symptoms (Toupin et al., 2008 ; Geller et al., 2004). Others have evaluated individual features involved in this symptomatology (Seog et al., 2008) but few studies have jointly considered both these two explanatory factors. Objectives: Distinguish the elective impact of psychiatric comorbidity and psychological factors (personality, perceived stress, coping strategies) on the severity of symptomatology in psychiatric adolescents. The study recruited 50 adolescents presenting an internalized disorder, and 55 adolescents presenting an externalized disorder, aged between 11 and 17. Self-assessment was used, being the Children Depression Inventory for Children (Kovack & Beck, 1977), State Trait Anxiety Inventory for Children (Spielberger, 1983), Junior-Temperament and Character Inventory (Asch et al., 2009), Metamotivational Style Profile for Children (Sit et al. 2005), and Coping Across Situation Questionnaire, Problem Questionnaire (Seiffge-Krenke et al., 2008). Hetero-assessment (parents): Conners Parents Rating Scale (Conners, 1990) Kiddie-SADS (Puig-Antich, 1978). Preliminary results show that most adolescents presented a comorbid disorder (62%; 67%). Low individual maturity, high perceived stress concerning self qualifications and use of avoidant coping strategies in peers relationships were related to the severity of depressive symptomatology. High harm avoidance and high perceived stress concerning self qualifications were related to the severity of anxiety symptomatology. The difficulty to self-control and low individual maturity were associated with several attentional problems. Low individual maturity was involved in the severity of hyperactive symptomatology. Finally, oppositional symptomatology was essentially explained by a psychopathological factor: ADHD-ODD comorbidity. These results emerge from a dimensional approach of psychopathological disorders and allow specification of individual factors electively involved in their respective symptomatology. This kind of research might improve therapeutic treatment of these disorders.

Keywords: psychopathological disorders, adolescence, treatment, symptomatology

Quality of working life and the worker's well-being

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The present research has the objective of identifying the relationship between Quality of Working Life (QWL) and the worker's well-being. The QWL is realized through the many actions of an organization aiming to develop improvements and management and technological and structural innovations in the work environment, thereby identifying the worker's experience as a central element in the organizational dynamic. Five factors are considered in the evolution of the QWL: Support of the worker's accomplishment (execution and/or performance), Relationships, Professional Respect, Recompenses and QWL Programs. Personal Well-being within organizations is understood in terms of needs accomplishment and the individual's desire-satisfaction through organizational performance. The systemic vision perspective is adopted to best attend to the study objective, considering QWL as a macro-systemic variable and personal Well-being a variable of micro-organizational level. The basic assumption of this study is that the perception of individuals of the actions of QWL influences how they experience Well-being in organizations. The instrument used to assess Well-being was a one-factor scale, interval scale, five points, composed of 16 items, statistically validated by Paz (2005), with reliability measures (Alpha de Cronbach) from 0.88 to 0.91 in different samples. The other instrument used to assess QWL was an interval scale of five points, composed of 31 items, based on the theory of Walton (1999), validated semantically by Paz (2006), with good levels of reliability and validity. Both were applied to 40% of the population of employees of an organization, representing 94 research participants. The statistical descriptive and inferential analyses were done using the Statistic Program SPSS version 13.0. The results showed that, for this sample, the factor "Relationship" was perceived by most respondents as indicative of QWL among the factors "Relationship" and "Professional Respect" as QWL factors that best predict the Well-being of workers studied. The conclusion is that the organization concerned should pay more attention to the others factors that foster Well-being and a better QWL is also favored when there is a fair system of rewards,

when the organization supports the work and can make possible professional respect.

Keywords: *quality of work life, workers' experience, well-being, professional respect, worker's accomplishment*

Rapid situation assessment of injecting drug users and their response to HIV/AIDS in order to prevent HIV/AIDS and develop appropriate harm reduction strategies in Banceuy Prison, Bandung

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The aim of this rapid assessment of the situation in Banceuy Prison was to identify the existing situation, problems and also opportunities for interventions. Data were collected from the research respondents by conducting in depth interviews among 30 inmates and injected drug users who had stayed at least 3 months in Banceuy Prison. It was assumed that within 3 months they would already know the situation and condition of the prison. The main routes of HIV/AIDS transmission among the respondents are intravenous drug use and unsafe sexual behavior. Knowledge of the inmates on HIV/AIDS and the transmission was low and most of them refuse to change their behavior. Their intention to do the HIV test is high but there are several barriers that hinder them to do the testing as soon as possible. Since most of the inmates have difficulties in completely quitting from injecting drugs, support from others is urgently needed. Programs must be carried out to improve health services for inmates within the prison, developing support groups and increasing their knowledge about HIV/AIDS.

Keywords: *HIV, prison, drug use, inmates, support groups*

Real behaviors and ideal behaviors at the problematic situations in romantic relationships

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The first purpose of the current study was to reveal that adolescents can really take and recognize desirable behaviors. The second purpose was to examine the relationship between real behaviors and ideal behaviors by sex. Three hundred and sixty seven undergraduates in Japan (27% male; mean age=20.2) completed the measure of real behaviors and ideal behaviors at the 10 problematic situations in romantic relationships (Aiba, 2009). Real behaviors were 4 behaviors (2 desirable, 2 not-desirable) per situation and measured by "How much will you really behave?" (Range=1-5). Ideal behaviors were the same as real behaviors and measured by "How much do you think that these behaviors are desirable for the opposite sex?" (Range=1-5). The means of real behaviors and ideal behaviors showed that not-desirable behaviors (thinking alone how to do, asking the lover for a reason) had the highest means in real behaviors at "anxiety for future relationship" and "broken heart". At other situations, desirable behaviors had the highest means in both real and ideal behaviors. As a result of the correlation analyses between real behaviors and ideal behaviors by sex, there were significant correlations ($r=.18$ - $.45$) at all situations in females. On the other hand, there were no significant correlations ($r=.07$ - $.40$) at half of the situations in males. The results indicate that although many adolescents recognize that "thinking alone how to do" at "anxiety for future relationship" or "asking the lover for a reason" at "broken heart" are not-desirable behaviors, they really took those behaviors. Based on sex differences of the correlations between real behaviors and ideal behaviors, it is possible that females can really take and recognize desirable behaviors, but males cannot take or recognize those behaviors.

Keywords: *romantic relationships, real behavior, ideal behavior, adolescents, Japan*

Reducing stormwater pollution in a small commercial district – do education campaigns work?

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The aim of this research was to determine whether a low-cost, 8 month education campaign operating within a small commercial district would be successful at reducing stormwater litter loads and changing people's littering behaviour. The campaign was conducted with 26 small businesses and the general community in a small suburban commercial district in an Australian city. Campaign elements included brochures, posters, merchant site visits, meetings, a cooperative clean-up event, improvement to council managed infrastructure (including bins), windproof ash-trays, drain stenciling, and clean-up of dumped rubbish. Outcome measures included: (1) monitoring of litter loads in stormwater (kg/day); (2) independent assessments of merchant stormwater and litter management activities, e.g., accumulation of trader waste; (3) observations of littering behaviour; and (4) knowledge and attitudes of merchants and the community using face-to-face surveys. Monitoring occurred at the campaign site and a control site 7 months prior to the campaign, during the 8 month campaign, and at 7 month follow up. The campaign produced mixed results. Compared to the control location: (1) the campaign had a moderate positive effect in reducing litter loads; (2) a modest improvement occurred in the litter and stormwater management activities of traders during the campaign, which receded at follow up; (3) community knowledge of littering and stormwater management (e.g., where stormwater goes, its treatment, etc.) did not improve, and merchant knowledge outcomes were inconsistent with clear improvements evident for only 20% of merchants; (4) community attitudes towards littering and litter management remained largely unchanged, with merchants becoming more pessimistic about change over the monitoring period; and (5) compared to baseline, the community showed some improvements in their disposal actions (using bins) during the campaign, which although maintained at follow up, were not statistically significant. Monitoring the effectiveness of education campaigns for stormwater quality improvement can be complex. To obtain a more substantial and consistent reduction in stormwater litter load, campaigns need to be ongoing, participatory, target both merchants and the community with

equal intensity, include strong incentives and rewards in addition to the use of penalties to stop activities such as illegal dumping, be responsive in using monitoring information to modify the campaign while its operating, be tailored to accommodate local environment features and work schedules of participants, and provide high quality bin-related infrastructure and associated maintenance.

Keywords: *pollution, stormwater pollution, education campaigns, littering behaviour, commercial district*

Relations among dependency/sociotropy, self-criticism/autonomy, stressful life events and depressive symptoms

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Personality has been traditionally conceptualized as a diathesis for depressive disorders, and has been particularly congruous in its interaction with stressful life events. Dependency or sociotropy (DEP-SOC) and self-criticism or autonomy (SC-AUT) as personality dimensions of vulnerability have enabled the formulation of the “congruency hypothesis”. This hypothesis includes precise predictions of interactions between personality and stressful life events. However, empirical support for the congruency hypothesis has been mixed. Then, recent research has posited that personalities could serve as outcomes, rather than causes, of depression. For this reason, depressive individuals may have shown both, high DEP-SOC and SC-AUT. In this study, we address a mediating model that links personality vulnerability, stressful life events—interpersonal or achievement-related, and depressive symptoms. Then, we focus on four subgroups of personalities of the DEP-SOC and SC-AUT dimensions: high-high, high-low, low-high, low-low. For individuals who have high-low and low-high as their DEP-SOC and SC-AUT, interpersonal or achievement-related stressful life events could have an effect on their depressive symptoms. Three hundred and fourteen female university students responded to measures assessing the DEP-SOC and SC-AUT dimensions among them as well as stressful life events

(interpersonal and achievement-related) and depressive symptoms. We used the Depressogenic Schemata Scale, which yields three factors: Dependence of Evaluation on Others (DEP-SOC), Intention of High Achievement (SC-AUT), and Fear of Failure. Participants in the remaining four groups were then labeled as high depression ($N=109$), pure DEP-SOC ($N=57$), pure SC-AUT ($N=58$), and control ($N=90$). Regression analysis indicated that among individuals in the pure DEP-SOC group only negative interpersonal life events could predict an increase in depressive symptoms, whereas among individuals in the pure SC-AUT group only stressful achievement-related life events could predict increased depressive symptoms. Among high depression and control individuals, stressful life events were not able to predict depressive symptoms. These findings are discussed in terms of the need to consider DEP-SOC and SC-AUT and stressful life events as causes of depression, and as indicators of the value of investigating the relations between personalities, stressful life events, and symptoms of depressions.

Keywords: *personality, depression, stressful life events, dependence, self-criticism*

Relations between corporal posture and emotions

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Many authors empirically suggest that the posture of each individual is a consequence of their emotions. Some have observed that the alteration of one factor modifies the other, and it is easy to imagine if we think about posture as the result of muscular contractions. Anxiety is a very clear example, as it directly affects the cardiac muscle and its rhythm, and the diaphragm and breathing, among other muscles. The inverse is also valid, that anxiety can be diminished by relaxing the muscles. This effect can also be achieved by relaxing the diaphragm with deep breaths. The objective of this work was to search for the existence of a relationship

between corporal posture and subjective emotional narrations. The posture of 28 women, aged 20 to 39 years, outside of the menstrual period, with normal or below weight corporal mass index, and without neurological, psychiatric or orthopedic problems, was photographed. Using tracings made on Corel Draw software it was possible to evaluate the postures. Emotions were evaluated through analogical scales demarcated from zero to ten for sadness, happiness, concern, fear, anger and depression. In order to statistically search for correlation between the postural and emotional evaluations a factorial analysis multivariate technique was used. Indications were found of correlation with values above 0.3 between raised shoulders and anger (0.32), raised shoulders and concern (0.32), valgus knees and anxiety (0.39), and scoliosis (represented by the difference between the angles of Tales) and concern (0.37). The other correlations showed very low results, tending to zero. It was possible to find indications of relationships between some emotions and positions. The biggest difficulty of the work was the subjectivity of the emotional narration, as the auto emotional evaluation is very complicated and may suffer great distortions. Other works and methodologies must be used to understand the extension and depth of these correlations. The importance of these findings may be of great relevance for the evaluation and treatment of diverse orthopedics and psychiatric pathologies.

Keywords: *posture, emotions, anxiety, muscular contractions, psychiatric pathologies*

Relations between personality dimensions and alexithymia

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The relationship between personality dimensions and alexithymia was investigated in a sample of students. A correlational analysis was performed to assess the kind of association existing among five personality dimensions including neuroticism, extraversion, openness, agreeableness, and conscientiousness with alexithymia and its three components. Three hundred and forty six students (156 boys, 190 girls) from the University of Tehran were

included in this study. All participants were asked to complete the Revised NEO Personality Inventory (NEO-PI-R) and Farsi version of the Toronto Alexithymia Scale (FTAS-20). Analysis of the data involved both descriptive and inferential statistics including means, standard deviations, multivariate analysis of variance, Pearson's correlation coefficients and regression analysis. Alexithymia showed a significant positive association with neuroticism as well as a significant negative association with extraversion and openness. The results also revealed that neuroticism, extraversion, and openness can predict changes of alexithymia and its three components. It can be concluded that personality characteristics will influence cognitive processing of emotional intelligence and regulation of emotions. Results and implications are discussed.

Keywords: *alexithymia, personality, emotional intelligence, emotion regulation*

Relations of anxiety and depression with the image of God in college students

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The aim of the current research is to investigate the relations of anxiety and depression with the image of God in Tehran medical sciences university. Using a proportional sampling procedure, the Image of God inventory (Lawrence, 1997) and symptom checklist-Revised (Derogotis et al., 1973) was administered on these students. Analysis of data using a multiple regression analysis revealed that the magnitude of anxiety and depression can be predicted from the quality of students' images of God. Moreover, data revealed that students who had positive and accepting images of God were lower in anxiety and depression than students who had negative and challenging images of God. The authors concluded that positive and accepting images of God were associated with lower anxiety and depression in college students who were studying in medical schools.

Keywords: *anxiety, depression, image of God, medical students*

Relationship between driver's attitude and driving anger in Japan

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Most research on aggressive driving has focused on identifying aspects of driver personality which will exacerbate it (e.g. impulsiveness, uneasiness, morality, driving anger, etc.). The present study investigated perceivers' inferences about the driving attitude of persons who engaged in driving anger. There were 167 participants (67 men and 100 women), ranging in age from 19 to 81 ($M=29.84$, $SD=11.75$). The driving experience of the sample ranged from 1 to 60 years ($M=9.97$, $SD=10.92$). Participants were Japanese driving license holders. The tendency to become angry while driving was measured with the 32-items of the Driving Anger Scale (DAS; Deffenbacher et al., 1994). Aggression, uneasiness/impulsiveness, critical attitude towards the norm, and driving pleasure tendency were measured using the Driver's Attitude Questionnaire (Fujimoto & Higashi, 1996). Responses to the DAS were subjected to a principal components analysis with a varimax rotation. Inclusion and exclusion criteria were set at 0.40. These procedures resulted in four factors (traffic obstructions, slow driving, hostile gestures, deviant norm). Cluster analysis was performed from the Driver's Attitude Questionnaire and four clusters were classified. Cluster 1 described a group of drivers confident at driving and critical towards the norm attitude. Cluster 2 described a group of safety driving attitude drivers (subscales score is low). Cluster 3 described a group of high unease drivers. Cluster 4 described a group of drivers who were confident at driving and had a positive attitude towards the norm. A repeated-measures one-way ANOVA was performed for attitude clusters with different DAS subscales. The result indicated that DAS scores was higher for cluster 1 than others. The present study was conducted to investigate the relationship between driver's attitudes and driving anger, and it found that driving confidence and critical attitude towards the norm drivers felt anger while driving. Emotional arousal can influence perception and information processing; this influence could presumably be strong enough to disrupt driving proficiency sufficiently to increase accident risk

(Deffenbacher et al., 1994). That is, driving confidence and critical attitude towards the norm drivers are easily irritated while driving, and more likely prone to accidents in Japan.

Keywords: *driver attitude, aggressive driving, personality, driving anger, driving confidence*

Relationship between humiliation, shame and guilt and narcissistic personality

AZAMI, R. (University of the Sacred Heart)

The narcissistic personality disorder in DSM-IV largely exhibits grandiosity, excessive need for others' admiration, and a lack of sympathy. The relationship between the narcissistic personality and shame is often indicated in clinical considerations. Kohut (1971) suggested that the narcissist felt shame when he lost admiration, and concluded that the exaggerated self was at fault. Lewis (1992) suggested that the narcissist was likely to feel shame because he had a tendency to focus on the global self to evaluate his failure. Previous empirical studies have often used the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979). However, Gabbard (1994) showed that the narcissistic personality was classified into the oblivious type, who was reckless of others, and the hyper vigilant type, who excessively cared about others. It has been observed that NPI assesses the oblivious type. Another recent view has suggested that shame is distinguishable from humiliation (Gilbert, 1998). Therefore, this study aims at examining the relationships between humiliation, shame, and guilt and the oblivious and hyper vigilant types of narcissistic personalities. A questionnaire was filled by 234 participants. First, they were presented with a scenario of getting scolded by the teacher during a seminar class as a social predicament. Then, they were asked to give their responses to words of humiliation, shame, and guilt, their reactions while facing social predicaments, and to rate themselves on the scale of oblivious and hyper vigilant narcissism (Nakayama & Nakaya, 2006). Structural equation modeling revealed that hyper vigilant narcissism elicited the strongest humiliation through feelings of humiliation, shame, and guilt, while oblivious narcissism inhibited shame and guilt.

Humiliation promoted aggressive responses, such as rejection and rebuttal, to others. In contrast, guilt controlled them and furthered the action of improvement. This model showed sufficient goodness of fit: GFI = .99, AGFI = .95, RMSEA = .02. Oblivious narcissism has been the core concept of narcissism. Therefore, researchers have posited that narcissism causes the attack action when the oblivious individual's self-esteem is threatened. However, it was found that the hyper vigilant individual's self-esteem elicited aggressive responses mediated by humiliation, while that of the oblivious individual did not.

Keywords: *narcissistic personality disorder, self-esteem, humiliation, shame, hypervigilant narcissism*

Relationship between psychopathological traits and sexual health in adolescents

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The objectives of this study are to determine whether psychopathological variables are a psychological risk factor for HIV infection in Colombian adolescents. The research is descriptive and quasi-experimental. According to Montero and Leon (2002, 2005) it is included in the category of quasi-experimental "all studies, even with the aim of contrasting the hypothesis of causal relationship, are limited more or less serious" to have success "(p. 608). In conducting an analysis of variance in terms of risk groups according to oral sexual conduct there are significant differences in psychoticism $F(2,344?) = 3.698$, $MSE = 0.357$, $P < 0.026$ compared with analysis by post-hoc DSM tests and least significant differences were found in the psychoticism among adolescents who emit high risk oral behaviors and medium risk and a marginally significant minimum difference between low risk and high risk. The results indicate that the more neutral stance, criminal behavior and sensation seeking lower condom use in vaginal sex for adolescents. On the contrary, greater ability to defend one's rights, make requests and having greater total social skills increase the use of condoms during vaginal intercourse. Similarly, higher sensation seeking

may indicate lower condom use in anal intercourse among adolescents. Finally, the results indicate that higher disinhibition, additional scale and psychoticism psychopathological features lower the use of condoms in oral sex among adolescents. With the analysis of post-hoc comparisons using DSM tests the least significant differences were found in criminal conduct and minimal differences between groups of high and medium risk to low risk group. With the lowest scores in the adolescent delinquent behavior low-risk group, but no significant differences were found between groups of high and medium risk. Cognitive behavioral variables and psychopathological traits related to risk levels of vaginal, anal and oral sexual behavior in Colombian adolescents. Using condoms consistently is mediated by factors which are not only individual but social. The characteristics of an environment coupled with the behavioral deficit increases the risk exposure to HIV infection. Psychopathological traits influence the level of knowledge, misconceptions, attitudes, susceptibility and self-efficacy of young Colombians which increases the level of risk exposure to HIV infection. Thus, knowledge, susceptibility and autoeficia of adolescents with psychopathic traits are more affected by lack of skills and capability to develop self-care behaviors, making it necessary to develop programs to include adolescents with psychopathological disorders.

Keywords: *HIV, condoms, Colombian adolescents, sexual behaviour*

Relationship between two people in adolescence

NAGASHIMA, A. (Gakushuin University)

The relationship between Borderline tendency and adolescence have previously been demonstrated, however there is a possibility that the relationship also affects borderline tendency. To verify the hypothesis we used semi-structured interviews and it was analyzed by the K.J. technique in order to understand the elements of couple-mind. Participants were ten normal university students, five male and five female. All participants were informed before

the interviews that this was investigation for research and that they were able to refuse participation. The study took place at the psychological laboratory, each interview taking about one hour. Students were presented with some cases about couples by the interviewer, and asked that whether it was a similar experience for them. The recorded data was ordered according to type, the settlement of the same meaning, and whether it was repeated. At the end, the sentences were typed on 2174 cards and, condensed into ten pieces; "feelings thought to like lover", "existence of other people or thing", "jealousy or envy", "compatibility of character", "gap of feelings", "fall out of love", "perplexity or confusion", "disgusting", "thinking about separate from lover", "becoming lonely feelings". At first, we expected that the data regarding feelings to the lover could be roughly divided into two categories such as borderline tendency, however, this study demonstrated that there are various and confused feelings between two people and they are very fluid. Additionally, we demonstrated that the relationship with other people or other things is likely to work sometimes negatively or sometimes positively, which remains balanced.

Keywords: *borderline tendency, adolescence, relationships, feelings*

Relationship between writing strategy and writing performance of Japanese elementary school students

YAMAGUCHI, Y. (Osaka University), NAKAYA, M. (Osaka University)

The purpose of this study was to examine the effective way of writing of elementary school students. Although several studies have been made on the relationship between the writing behavior and the writing performance, there is little agreement on which way of writing is more effective (Galbraith, 1992; Rijlaarsdam & Bergh, 2006; Torrance, Thomas, & Robinson, 1999, 2000). In addition, most of those studies have focused on high school students or undergraduate students and little attention has been given to the writing strategy of children. The participants in this study were 114 fourth-grade students from an elementary school in Japan. They produced a composition about

energy savings and completed the writing-strategy questionnaire for elementary school students (21 items). This questionnaire inquired how they planned, drafted and revised. They also completed the questionnaire which inquired about their self-efficacy for writing. All compositions were scored in terms of the number of words written and evaluated in terms of the quality by two raters by using a traditional holistic rating scale. Result of cluster analysis of the writing-strategy questionnaire identified four distinct patterns of writing behavior: a plan-and-develop strategy which entailed content development both prior to and during drafting; a plan-then-write strategy which planned mainly in advance of drafting; a plan-while-writing strategy which planned a little in advance and thought up contents concurrently with drafting, and a no-plan strategy which did not entail content development. The plan-then-write strategy produced a longer and better quality composition than the plan-while-writing and no-plan strategies. The no-plan strategy showed lower self-efficacy for writing than the other strategies. This study identified four kinds of writing strategies in terms of the stage at which writers decided contents for their text. This result corresponded to the previous research which focused on undergraduate students (Torrance, Thomas, & Robinson, 2000). This study revealed that in order to write effectively, it was important for children to decide contents in advance. It seemed that it was difficult for children to think up contents concurrently with writing a text.

Keywords: *elementary school students, Japan, writing, writing, self-efficacy*

Relationships among creative self-concept variables and employee creative behaviors

SMALL, C. (DEOMI/Florida Institute of Technology), RICHARD, E. (Florida Institute of Technology)

Eighty percent of managers rank creativity as one of the top requirements for corporate success (Walton, 2003). Because innovation is essential to the long-term success of organizations researchers are continuously striving to understand the creative process. This study focused on a relatively new theoretical

approach to studying creativity by focusing on social psychological constructs of self-concept. Creative personal identity (CPI) is the perception of oneself as being a creative person in general. Creative role identity (CRI) is the perception of oneself as being a creative person within a specific role, such as that of an employee. These constructs were examined as predictors of employee creative behavior. Based on a social identity approach, specifically the concept of self-verification, individuals who view themselves as creative in general (CPI) should strive to maintain consistency with that personal identity in order to maintain and affirm creativity as a key part of their overall self-concept. Similarly, individuals who have strong CRI were expected to engage in creative behaviors in order to verify their view of themselves as creative employees. Results of this study show that both creative personal identity ($\beta = .30, p < .01$) and creative role identity ($\beta = .38, p < .01$) predicted employee creative behavior after controlling for experience in the field. Because this is the first study to simultaneously examine CPI and CRI, confirmatory factor analysis was conducted, supporting CPI and CRI as distinct constructs. Additionally, CRI provided incremental validity over CPI by explaining an additional 14% of the variance in employee creative behavior, and CRI fully mediated the relationship between CPI and creative behavior. Creativity is essential for the success of organizations in today's competitive market. The insight this study provides into the antecedents of creativity in organizations is a first step toward maximizing the creative potential of the workforce. Implications from this study include the use of organizational initiatives to increase employees' creative role identity. Encouraging employees to view themselves as more creative and develop stronger creative identities is likely to promote creative behavior that confirms their self-view.

Keywords: *creativity, social identity approach, self-concept, creativity, creative role identity*

Relationships between achievement goals and achievement emotions

TAKIZAWA, E. (Gakushuin University)

In this study, the relationship between achievement goals and emotions in academic settings (i.e., achievement emotions) was researched. Based on earlier literatures (e.g., Pekrun, Elliot & Maier, 2006), we examined whether different achievement goals predict different discrete achievement emotions using a self-reported questionnaire. The research was conducted in two high schools in Japan. One public high school and one private high school around Tokyo participated in this research and the participants were 326 second grade high school students. The questionnaire included 12 achievement goal items and 48 achievement emotion items. The goal items included mastery-approach goal, performance-approach goal and performance-avoidance goal items. The achievement emotion items were based on the Pekrun's Achievement Emotions Questionnaire, and included enjoyment, hope, pride, boredom, hopelessness, anger, anxiety and shame items. Each item was translated into Japanese and was changed appropriately for Japanese high school students. Participants engaged in this questionnaire during homeroom hour under teachers' instructions. To construct each subscale, items which considerably decreased Cronbach's alpha coefficients were excluded. Multiple regression analyses were then conducted on each discrete achievement emotion to examine which achievement goal is a significant predictor. The results showed that mastery-approach goals were a positive predictor of enjoyment, hope, and pride, and a negative predictor of boredom, hopelessness, and anger. Further, they were a positive predictor of anxiety and shame. Performance-approach goals were a positive predictor of hope, pride, and anger, while performance-avoidance goals were a negative predictor of enjoyment and hope, and a positive predictor of boredom, hopelessness, and shame. Despite difference in the participants' age and the cultural context, the results in this research were largely consistent with the study of Pekrun et.al. (2006). However, results on anxiety and shame differed from Pekrun's study and this research. Furthermore, results concerning performance-approach goals were also different, warranting further investigation. Also, to find a more exact causal relationship, achievement goals and achievement emotions should be measured at the different times.

Keywords: *achievement goals, achievement emotions, Japanese, academic setting, performance-approach goal*

Relationships between factors in promoting a career commitment: The study of Japanese working women

WATANABE, H. (Doshisha University), UCHIYAMA, I. (Doshisha University)

The labor force participation rate of Japanese women has been on the increase since 1985. However, currently, about 65% of Japanese working women still leave the workforce after childbirth. In prior studies, a strong commitment to career is said to be influenced by various psychological factors such as identity, but the study of “relationships” between these psychological factors influencing women’s commitment levels has not yet been thoroughly examined. Therefore, we examined differences in these relationships between working women with no children and those with children. Three packets of questionnaires were mailed to 500 companies in Japan, and a total of 181 married working women (80 women with no children and 101 women with children) voluntarily responded. To describe their identities, participants were asked to indicate how much they were experiencing each of the feelings in the context of “home” and “work” with 20 adjectives, and also asked to indicate the subjective importance placed on these two contexts. A commitment level for career was assessed by U-GIDS, and attitudes toward motherhood and parenting were assessed by seven items. As a result of path analysis, identity dimension of interpersonal behaviors in the context of “work” predicted the subjective importance of work, which, in turn, positively affected women’s commitment levels. Regarding factors related to the context of “home,” there were differences between two groups. For women with children, commitment levels were determined by their attitudes toward motherhood related to identity dimension of interpersonal behaviors. However, for women with no children, both attitudes toward motherhood and parenting predicted their commitment levels independent of their identities. The career commitment of Japanese working women was determined by the

subjective importance placed on work, attitudes toward motherhood and parenting. Interestingly, our result suggests that married working women with children commit to their careers under no influence of parenting attitudes. Furthermore, whether these attitudes are influenced by their identities or not seems to depend on their experiences as a mother. For better understanding of women’s life course differences, future longitudinal studies are needed.

Keywords: *career, commitment, Japanese, labor force, parenting attitudes*

Relationships between features of collage works, block works, and personality

KATO, D. (Nagoya University), MORITA, M. (Nagoya University)

In this study, features of the collage works and block works were examined especially from the viewpoints of form and content. If it is possible to reveal certain commonalities between these techniques with respect to psychological assessment, the results would be considered useful in the evaluation of patients or clients when these techniques are applied in psychotherapy or counseling. Ten university students (2 males and 8 females; all subjects were 18 or 19 years old) participated in this study. Participants experienced the collage technique and the block technique in clinical psychology classes. Participants were also asked to complete a TEG (Tokyo University Egogram) questionnaire in this other class. The participants with high CP (Critical Parent) scores tended to correlate with the number of human figures ($r = .56, p < .10$) and plants ($r = -.55, p < .10$) present in their collage works and with the number of basic blocks ($r = -.67, p < .05$). Meanwhile, those with high A (Adult) scores correlated with the number of human figures ($r = .57, p < .10$) present in their collages and the number of basic blocks ($r = -.62, p < .10$). Finally, those with high FC (Free Child) scores tended to correlate with the area of expression ($r = .72, p < .05$) in collage works and the number of specific blocks ($r = .65, p < .05$). Therefore, to conclude, it was revealed that certain significant relationships exist between such features and

personality. Results of this study can be useful as important viewpoints for psychological assessment, and the techniques herein can be applied in several areas such as individual counseling, hospitals, and schools, to better understand the personalities of clients and patients.

Keywords: *collage work, block work, personality, psychotherapy, counselling*

Research on characteristics of elite fencers' reaction time of vision

FU, Q. (Capital Institute of Physical Education), LI, J. (Capital Institute of Physical Education)

The study examined the characteristics of fencers' reaction time (RT) in vision. Subjects were 115 fencers, who were from the National Fencing Team, Jiangsu team and Jiangsu Physical Education School. Grade (Olympic level, national level and province level) and category (Foil, epee and sabre) were tested with MANOVA. The results indicated that there were highly significant differences in identification RT, 4-stimulus selection RT and reversal RT across grades—the higher grade, the shorter RT, while not in the simple RT and 2-stimulus selection RT. The top two grade fencers did fewer wrong responses than the third one in all types of RT tests, except simple RT. The sabre fencers' wrong responses were significantly more than epee and foil fencers', along with the RT test becoming difficult. The epee fencers' wrong responses were lowest in identification RT and 2-stimulus selection RT test, while the foil fencers' were, in 4-stimulus selection RT and reversal RT. It was suggested that the elite fencers' excellent performance was a result of their mental advantage—ability of identification and decision-making in complex situations, and more effective adaptation in changing situations. The results also indicated that mental ability was affected by category in fencing.

Keywords: *fencing, reaction time*

Research on counselor's and client's response matching in solution-focused approach

SHIOMURA, K. (Iwate Prefectural University), TAKAHASHI, I. (Sendai Juvenile Classification Homes)

The present study examined the effect of consistency in the response orientation of counselor and client on impression ratings by the observers toward the counselor and its counseling situations. The 2 x 2 factorial design was applied for this experiment; the counselor's response orientation (affection-oriented counselor, cognition-oriented counselor) and the client's response orientation (affective-oriented client, cognitive-oriented client). 78 Japanese university students participated in the experiment. The results showed that the effects of consistency in the response orientation were revealed in the cognition-oriented counselor. In this counselor condition, the counseling situations toward cognitive-oriented client were positively evaluated than affective-oriented client by the observers. The matching effect in the response orientation was obtained only in the cognition-oriented counselor. The involvements for clinical practice of a response matching between counselor and client were explored.

Keywords: *response orientation, counselling, affection-oriented, cognition*

Research on dynamic assessment In Japanese science education

TERAMOTO, T. (Kokugakuin University), KINOSHITA, H. (Hiroshima HNIV), KADOYA, S. (Hiroshima HNIV)

The present research investigated the effects of Dynamic Assessment in Japanese science classes as a way to improve both diversified views on observation and descriptive abilities for writing observation records. The study also suggested appropriate instructional methods in the Japanese context. The study analyzed how students' notebook records changed when "Dynamic Assessment" was introduced and when students were instructed to relate "hypothesis" with "observation views" in 6th grade experiment/observation classes. The results indicated that students were able to relate "hypothesis" and "observation views" and to gain "recording strategy" through mutual

interactions as well as with teachers' appropriate instructions in repeated and similar learning situations. This research supported the idea that Dynamic Assessment is effective for science education in Japan.

Keywords: *dynamic assessment, science education, Japan*

Research on mental types of Chinese undergraduates

FU, R. (Changsha University of Science & Technology)

The aim of the current study was to examine the status quo and mental types of Chinese undergraduates. The Myers-Briggs Type Indicator (MBTI) was used and group testing on 346 undergraduates in China. Four main findings were found: (1) Out of the mental types of today's undergraduates in China, the best salient, of highest proportion, in comparison to other mental types is ISJT (15.6%), and one of the lowest proportions with the least amount of people is ISTP (1.4%); (2) The number of extroverted undergraduates (E, 56%) is higher than the introverted undergraduates (I, 44%) and the number of sensory undergraduates (S, 27.7%) is higher than the intuitive undergraduates' (N, 21.9%). The number of thinking undergraduates (T, 32.25) is higher than the feeling undergraduates' (F, 17.2%) and the number of judge undergraduates (J, 49.4%) is higher than perceptive undergraduates' (P, 50.6%); (3). The important degree of independent variables which influence the dependent variables respectively is, from strong to weak: specialty, ethnic, grade, homeplace, where the affect of gender is very small, and the influence on mental type from political identity is negative; and (4) Though the influence on mental type which results from specialty, ethnic, grade, homeplace, sex, political identity, is not statistically significant, their influence on mental type are respectively important.

Keywords: *mental types, China, undergraduate students, status quo, individual differences*

Research on the current status of cultivating creative spirit of Miao and Buyi college students in China

WANG, H. (Guizhou Normal University), LIU, H. (Guizhou Anshun College), PAN, Y. (Guizhou Normal University), SONG, Z. (Guizhou Normal University)

The aim of this research was to investigate the current status of cultivating creative spirit of college students who were from Miao and Buyi national minorities in China, to offer the consulting for their education. First, we manufactured the Questionnaire of Creative Spirit (QCS) with higher reliability and validity for Chinese College students. Second, we investigated more than 2000 College students of Miao, Buyi and other national minorities who were mainly from four provinces (Yunnan, Guizhou, Sichuan and Chongqing) in southwest of China with QCS. The results were as follows: Firstly, the scores of Miao and Buyi college students' Creative Spirit were in the level of the middle and above. These students had higher rethinking, and could monitor and evaluate during the process of problem solving. They had higher mean scores in the dimension of rethinking, but lacked enough teachers' guiding and supporting in their creative spirit culturing. Secondly, Miao and Buyi college students' creative spirit showed some different characteristics in school and family factors, and had gender, grade, major and school type differences. They also had some differences in the aspects of whether they were a single child or not, whether they were eldest or youngest amongst siblings, the status of family economics, parental education, and so on. Thirdly, the results showed significant interactive effects in major and gender, and major and grade. Fourthly, Miao and Buyi college students had higher scores than other national minorities of college students in the maverick, rethinking, college course, companion influence, and whole creative spirit. However, there were no significant differences between Miao and Buyi college students in above four dimensions and the whole creative spirit. Under the condition of this research, we could make these conclusions: Miao and Buyi college students had higher rethinking; their Creative Spirit was in the level of the middle and above, but lacked enough

teacher guidance and encouragement in their creative spirit cultivating. These college students' creative spirit showed different characteristics in school and family factors, and had gender, grade, major and school type differences. There were significant interactive effects in major and gender, and major and grade.

Keywords: *creativity, problem-solving, teacher guidance, teacher encouragement, creativity*

Research on the status of subjective well-being and its interactional deciding model of multi-factor

MINGQIU, F. (Chongqing University of Posts and Telecommunications)

The aim of this poster is to summarize the status of subjective well-being and put forward its interactional deciding model of multi-factor. It will summarize the characteristics, dimensions and objective factors of subjective well-being at home and abroad, describe the main theory and related research of it, and to then put forward the model's assumptions. The findings were that: 1) Genetics have a great impact on subjective well-being; 2) genetics affects the formation of personality, and the personality strongly influences subjective well-being, especially factors such as self-esteem, introversion and extraversion, locus of control, self-concept and optimistic; 3) Subjective well-being has a counter-reaction to people's personality; 4) Objective factors also affect people's subjective well-being where culture, economic income, religion, health, social relations, marriage and so forth have significant influences on subjective well-being, but race and gender have a little effect on it; and 5) major life events have a great impact on subjective well-being in the short term, but it will no longer work after people have adapted to them. Based on the existing theories and related research of subjective well-being above, we have proposed the interactional deciding model of multi-factor on subjective well-being

Keywords: *subjective well-being, genetics, personality*

Researching on the social identity status of Chinese undergraduates

DENG, Z. (Changsha University Of Science & Technology), OUYANG, W. (Changsha University of Science & Technology)

This paper presents the situation of social identity of Chinese college students, and the influence of factors of empirical research. After investigating the social identity of 565 undergraduates through identity orientation scale (Cronbach $\alpha=0.831$). This scale developing by us consisted of four components, namely personal identification (PI $\alpha = 0.801$), relationship identification (RI $\alpha = 0.812$), social identity (SI $\alpha = 0.794$), and collective identity (CI $\alpha = 0.805$). Four conclusions are drawn: first, that identity orientation of undergraduates is mainly composed of personal identity and social identity, and besides its own connotation, social identity consists of relational identity and collective identity; Second, no matter whether personal identity or social identity is concerned, positive factors of identity in undergraduates are higher than negative factors; Third, the factors of influence on the undergraduate social identity are in turn political identity, ethnic, sex, specialty, birth place of undergraduate, grade, but each effect of them is not strong enough; and fourth, the effect of political identity, specialty, birth place of undergraduate, grade on social identity shows a diversity of significant difference. Chinese students' identification tendency is positive, but the influence of social identity on political identity, professional, origin and grade has significant differences.

Keywords: *social identity, China, college students, personal identification, collective identity*

Resilience in parents of children with cancer: Examining a link to secure attachment and the influences of coping strategies, social support, and family functioning

STEBBENS, D. (Central Queensland University), RONAN, K.R. (Central Queensland University)

Against the backdrop of attachment theory and resilience theory, this cross-sectional and correlational study examined the link between secure adult attachment and resilience in parents whose children have been diagnosed with cancer. Thirteen fathers and 67 mothers, aged between 20 and 64 years, from Australia, New Zealand, USA, and other countries completed a self-report battery consisting of the Experiences in Close Relationships Scale-Short Form (Wei, Russell, Mallinckrodt, & Vogel, 2007), the Connor-Davidson Resilience Scale (Connor & Davidson, 2003), the Goldberg General Health Questionnaire (Goldberg & Williams, 1988), the General Function subscale of the McMaster Family Assessment Device (Epstein, Baldwin, & Bishop, 1983), and the emotion-focused and avoidance-focused coping scales adapted from the Multi-Dimensional Coping Index (Endler & Parker, 1990) for this study. Further questions included indicators of support, demographic and disease-specific factors, and psychosocial indicators relating to the parent and their child. Resilience and secure attachment were correlated with reduced use of emotion-focused coping, greater perception of availability of support, and increased psychological health. Membership of a support group was correlated with increased psychological health. Reduced use of repressive-focused coping and emotion-focused coping was associated with greater perceptions of support. By contrast, findings in relations to family functioning went against expectations. Family functioning was negatively correlated with resilience, secure attachment, psychological health, coping strategies, and support indicators suggesting perhaps a protective but reactive mechanism at work here. Findings provide support for a link between resilience and secure attachment in this sample. This link is influenced by coping strategies, social support, and family functioning.

Keywords: resilience, parents, children with cancer, attachment theory, coping strategies

Retroactive interference and mental practice effects on motor learning

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Mental practice has long been a part of preparation for performance. It has been shown that imaging a motor skill can interfere with the subsequent performance of a motor task. No study, however, has examined how the similarity of an interference task influences the mental practice effects on motor performance. This study examined the effects of a similar versus dissimilar retroactive interference component on the mental practice effects of learning a novel motor skill. Ninety participants (62 female, 28 male) aged between 18 and 51 years ($M = 26.81$, $SD = 9.62$) completed a pretest of 10 blocks of 5 trials of throwing a tennis ball into a netball goal ring, followed by an intervention specific to their group (control, mental practice-retroactive interference similar, mental practice-retroactive interference dissimilar), which was followed by a post-test of 10 blocks of 5 trials of the initial throwing task. Participants then completed a Social Validation and Comments Questionnaire. A mixed ANOVA revealed a main effect for Test ($F_{1, 87} = 25.20$, $p < .05$) with the performance for all three groups improving from pre- to post-test. The main effect for Group and the interaction effect were not significant, indicating that there were no differences in the increases in performance between the three groups. The first planned interaction contrast revealed that the control group improved significantly more than the two mental practice groups ($F_{1, 87} = 104.17$, $p < .05$; $r = 0.74$). The second interaction contrast revealed non-significant results, indicating that there was no difference in the increases in performance between the two mental practice-retroactive interference groups. The control group improved significantly more than the mental practice groups. This suggests that using imagery in conjunction with an interference task may actually disrupt the learning of a novel motor skill. It was also found that there was no performance difference between similar and dissimilar mental practice interference groups, indicating both conditions equally interfered with the learning of a novel motor skill. These findings provide important information about the different theoretical explanations for mental practice effects, in particular the symbolic learning theory and functional equivalence theory.

Keywords: *mental practise, motor performance, symbolic learning theory, functional equivalence theory*

Road rage: Aggressive behaviour

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The present study aims for a multi-angular analysis of the road rage phenomenon in Portugal, with a focus on the phenomenon context and the causes of aggressive behaviours in the conduction. The Driving Anger Scale (DAS; Deffenbacher, Oetting & Lynch, 1994) was used to assess road rage and the Big Five Inventory (BFI; John, Donahue & Kentle, 1991) for psychological variables. Participants in this study were 480 drivers, with a mean age of 33.63 years old ($SD=10.59$), 210 that revealed that they had never been involved in accidents and 270 that already have had at least one accident. The accidents and infractions/violations to the code of the road had happened mainly for males, and in those with a higher number of covered kilometres. It was also found that the emotional instability of women, and the biggest search for sensations in men, leads to more aggressiveness in driving. Drivers between the ages of 18 to 24 years were the ones that on average revealed more aggressive behaviours while driving. The results are discussed in the context of previous literature.

Keywords: *road rage, drivers, aggression, gender, Portugal*

Safety climate and safety backup behavior among Japanese healthcare workers: Testing a mediation model

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Although previous studies have found a relationship between safety climate and workers' safety performance, the mechanisms underlying this relationship remain less clear (Clark, 2006; Zohar, 2003). The present study

examined the potential mediating role of two motivational factors (evaluated effectiveness of safety performance, and psychological safety). Based on past research findings, the meditational model that the effects of safety climate on safety performance are mediated by motivational factors was constructed and tested. Data were collected from 341 nurses working at a hospital. The questionnaire consisted of the following scales. 1) Several researchers have suggested that workers' safety performance consist of multiple dimensions (e.g., Griffin & Neal, 2000). This study proposed a new dimension of safety performance: safety backup behavior, defined as cooperative behavior for avoiding or recovering from hazards which contribute to accidents. Respondents self-rated their frequency of safety backup behavior (8 items). 2) Safety climate was measured in terms of two variables. Hospital safety climate refers to top management practices and policies of safety (8 items). Supervisory safety climate refers to supervisory actions and practices which reflect the priority of safety (7 items). 3) Evaluated effectiveness of safety backup behavior was measured by the extent to which respondents believe that backup behavior is effective for accident prevention (8 items). 4) Psychological safety refers to workers' perceptions of the consequences of taking interpersonal risks in their work environment (Edmondson, 1999) (7 items). Factor structures and internal consistency for all scales were confirmed. The hypothesized meditational model was tested using path analysis with structural equation modeling. The model provided a good fit to the data ($AGFI = .94$, $CFI = .95$, $RMSEA = .08$). Both of motivational factors, i.e., evaluated effectiveness and psychological safety, had positive relationships with safety backup behavior. Hospital safety climate had only positive relationships with evaluated effectiveness. Supervisory safety climate had positive relationships with evaluated effectiveness and psychological safety. Over all, these results supported the hypothesized model. Thus, organizational and supervisory safety climate were positively associated to evaluated effectiveness and psychological safety, which in turn indirectly enhanced safety backup behavior.

Keywords: *safety, behaviour, psychological safety, psychological effectiveness, Japan*

Science education and prevalence of pseudoscientific beliefs

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It has been claimed that people, even adults, are credulous in believing claims which lack scientific grounds to be true. Some attempts to help to achieve scientific literacy were made, however, they seemed not to be going well. The prime objective of the present research was to investigate to what extent were various pseudoscientific beliefs prevalent in adults. Relationship between these beliefs and educational background during secondary schools, exposure to mass media, and thinking dispositions were also examined. A total of 263 undergraduates (94 females, 169 males) participated in the research. The materials were presented in a booklet consisting of a cover page with instructions, two pages with thinking disposition scales, one page with a belief task, and one page with face-sheet questionnaires that asked educational background, attitude toward science, and frequencies of exposure to mass media. In the belief task, participants were asked whether they knew each of 34 topics or claims (4 scientific, 2 non-scientific, 28 pseudoscientific or proto-scientific). Then, they were asked whether each claim was true, and whether it was scientifically valid. First of all, participants were able to distinguish scientific and non-scientific topics, while they were credulous in believing that some pseudoscientific claims were true. A correlational analysis showed that participants' evaluation whether a topic was true and the judged validity of that claim were strongly correlated in all topics. Meanwhile, their educational background and/or attitudes toward science were correlated with these judgments only on a few topics. It was also shown that the need for cognition scale (Cacioppo & Petty, 1982) was weakly correlated with judged truthfulness or validity in some topics. Present results showed that pseudoscientific beliefs were not so prevalent in adults. Participants seem to generally have good science background. However, in some pseudoscientific or proto-scientific topics, validities of claims were overestimated, and educational background didn't mediate these judgments.

Keywords: *pseudoscience, beliefs, educational background, exposure to mass media, thinking dispositions*

Scoping the fireground: The range and bias of information used in decision-making in simulated fireground exercises

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The aim is to improve understanding of the cognitive processes underlying fireground decision-making. The specific aim is to determine the "scope" of information sampled and used by FRS personnel in simulated fireground contexts and whether an increase in the uncertainty of the situation provokes either a narrowing or alternately a broadening of scope. Past research in military contexts (Edgar et al., 2009) suggests that with uncertainty, the scope of information being used may narrow, with potentially risky consequences for decision-making. The method involves the assessment of decision-making in simulated fireground exercises (e.g., Minerva.) with operational Fire and Rescue Service personnel in the U.K. The information sampled and used by the Ps is probed with "True/False" questions about central and peripheral items during the exercise. The responses are analysed by the QUASA model (Edgar et al., 2009) using a "dynamic" signal-detection approach to track decision-making over the course of time. Probe questions estimate (1.) "situation awareness" (the knowledge of the situation) and (2.) the "bias" or scope of the decision-maker specifically whether this is widely or narrowly focused. Of particular interest is whether a sudden loss of certainty in the situation induces a narrowing of bias. To date, two preliminary observations of Minerva and Hydra training exercises have taken place in preparation for full testing programmes in February-March. The preliminary data are supportive of the general approach and of the proposal that the bias or scoping of information may shift with a sudden increase in situation

uncertainty. Further testing will provide full assessment of this initial trend. The data will be analysed in terms of the QUASA model and discussed in terms of the interplay amongst situation certainty, confidence and bias. The possibility of individual patterns and variations will also be considered.

Keywords: *emergency services, decision making, fireground exercises, situation awareness*

Searching Continuous Line (SECLINE): A new technique for assessing retrospective changes in psychological status from line drawings

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The Searching Continuous Line (SECLINE)-method was developed to measure dynamic changes in psychological status directly from line graphs drawn by participants. The reliability (internal consistency) and validity of the method was assessed. Forty seven university student participants (mean age = 20.2) were asked to complete the following Japanese language 4 self-report questionnaires. (1) K6 Questionnaires of the SECLINE method consisted of line graph forms for each of the K6 items (Kessler, et al., 2002) that measure depressive psychological status. The instruction was "Please remember changes in your psychological status and draw line graphs." The items were six items of K6. Time-axis from October 23 to December 31 was represented in the horizontal axis. Value-axis was represented in the vertical axis on the left, with labels 4 (always) to 0 (never). The lines drawn by participants on these forms were scanned, and heights of lines were calculated 200 times horizontally along the time-axis. (2) Likert-type K6 Scale consisted of 6 items ($\alpha = .78 - .88$). (3) Negative Rumination (Ito & Agari, 2001) consisted of 14 items which measured the tendency to ruminate negative thoughts ($\alpha = .91$). (4) Optimism (Scheier & Carver, 1985) consisted of 8 items which measured the tendency to be optimistic ($\alpha = .68$). Cronbach's α for K6 SECLINE-method was calculated 200 times for each 200 date points. It ranged from .79 to .86. The

validity of K6 SECLINE was confirmed by correlations between K6 SECLINE-method and the original Likert-type K6, and correlations with the two variables - negative rumination and optimism. The K6 was hypothesized to relate positively to negative rumination and negatively to optimism. The results showed correlations of K6 between the SECLINE-method and the Likert-type scale were between .75* and .79*. Correlations between K6 value using the SECLINE-method and negative rumination and optimism were between .37* and .47* and between -.25[†] and -.32* respectively. These results indicated not only that the K6 by the SECLINE-method has sufficient reliability and validity, but also that the SECLINE-method itself is useful for dynamic retrospective data.

Keywords: *Searching Continuous Line (SECLINE), psychological status, line drawings, retrospective change, validity*

Secretary problem: Optimal stopping behavior

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"Secretary Problem" is a sequential observation and selection game. In this game, the decision maker is faced with a set of items (applicants), which are presented to them one at a time in a random order. At each period, the decision maker needs to rank all items that have already been observed in terms of their quality, desirability or attractiveness. As each item is observed, one in each period, the decision maker must either accept it, in which case the search process terminates, or reject it, in which case the next item in a randomly determined order is presented and observed. Searle and Rapoport (2000) found that people always stop too early. The procedure of "Secretary Problem" is like those selections in enterprises, but in the real selection it is difficult to control and manipulate variables. In the presented research, our objectives were to learn how long the enterprises collect the résumés of applicants, how many résumés will be collected before selection, what the behavior model of selectors is, and what the optimal stopping is. We asked selectors to introspect them at the latest selection and found they were more rational than people in the game.

Keywords: *stopping behaviour, selection, résumé, observation, secretary problem*

Selected psychosocial variables, type D personality, burnout syndrome, and cardiovascular risks

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As early as the 1980s, professional literature all over the world began to reflect possible connections between the level of cardiovascular disease (CVD) risk factors, selected psychosocial variables, and burnout syndrome. CVD being the most common cause of death worldwide. In this context, one has to realise that up to 80% of premature cardiovascular deaths are identified as preventable (WHO, 2009). With respect to these findings we decided to verify the validity of the mentioned aspects in an empirical survey carried out on a sample of the Czech adult population. Between 2006 and 2008, the prospective survey which focused on potential connections between below mentioned variables and CVD risks was implemented. The sample of participants was obtained by addressing both Czech and international companies, enterprises and institutions, which had previously taken advantage of collaborating with the National Institute of Public Health and other medical institutions to implement prevention programmes aimed at health protection and promotion of their employees. A sample of 78 adults was surveyed regarding their level of burnout, type A behavior, type D personality, life and daily events, socio-demographic data, blood pressure, triglycerides, total, high density lipoproteins (HDL), low density lipoproteins (LDL) cholesterol. A complex life-style intervention was provided during the study. Intervention activities were conceived broadly to cover the areas of diet and exercise, the prevention / giving up of smoking, and also intervention activities in the area of coping with load and stress and training in relaxation methods. As a results of the intervention, significant changes (a decline) in total and LDL cholesterol, A-type of behaviour, tension, frustration, negative affectivity, hostility, life and daily events, and social support (an increase) were found. No changes in

burnout, irritability, interpersonal sensitivity, and D-type of personality were proved. Regression analysis showed that burnout that was assigned in 2006 predicted (together with level of irritability) the level of HDL cholesterol in 2008. Similar results were reported (with vital exhaustion) in Koertge et al., 2003.

Keywords: *cardiovascular disease, risk factors, personality, psychosocial factors, interventions*

Self-concept clarity and women's sexual health and general wellbeing

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Positive sexual attitudes and experiences are important to the sexual health and general wellbeing of women. Many psychosocial factors are known to be relevant to these experiences, including women's self-concept. The purpose of this study was to investigate the role of self-concept clarity, a core structural aspect of self-concept, in the sexual health and general wellbeing of women. A total of 261 women aged 18 years and over ($M = 25.76$, $SD = 7.90$) completed an online survey assessing the role of self-concept clarity in three measures related to women's sexual health and wellbeing: sexual self-efficacy, sexual self-esteem and sexual satisfaction. The questionnaire also assessed four structural dimensions specific to sexual identity (commitment, synthesis/integration, exploration and orientation identity uncertainty) to assess the psychological pathways through which self-concept clarity influences women's sexual health and general wellbeing. A series of correlations, regressions and path analyses revealed that: i) self-concept clarity is relevant to women's positive sexual self-efficacy, sexual self-esteem and sexual satisfaction; and ii) the sexual identity dimensions commitment and synthesis/integration mediate the relationships between self-concept clarity and women's sexual self-efficacy, sexual self-esteem and sexual satisfaction. These findings highlight the importance of including structural aspects of self-concept in explanations of women's sexual health and general wellbeing, and reveal the relevance of aspects of sexual identity other than sexual orientation in these explanations.

Keywords: *sexual health, sexual identity, well-being, women, self-concept*

Self-efficacy, emotional states, and perceived performance qualities in young competitive swimmers

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Being able to monitor accurately one's emotional states and progress is important for self-regulated learning and consequent successful performance. This study examined self-efficacy, performance related emotional states and perceptions of performance in a team of competitive swimmers over six weeks. Participants were 19 swimmers (10 male and 9 female; aged 14.95, $SD = 0.97$ yrs) competing in backstroke ($n = 3$), freestyle ($n = 7$), butterfly ($n = 4$) and breaststroke ($n = 5$) modalities. Swimmers' self-efficacy was assessed on an eight-item instrument successfully used in school settings (Nietfeld, Cao, & Osborne, 2006). The questionnaire, adapted to swimming, asked swimmers to judge the applicability of each statement (i.e. "I can do well in swimming") on a 5-point Likert scale (ranging from 1 = nothing, to 5 = a great deal). Emotional states prior to best and worst performances were identified using individualized emotional profiling (Hanin, 2000). Emotional states prior to two competitions (weeks 3 and 5) were compared with previously established profiles. A list of performance qualities (one for each stroke) was developed specifically for this study to help swimmers assess their performance. The list was created based on the most important elements of successful performance as identified by expert coaches. Examples of elements include "hands entering water in line with shoulders" (backstroke swimming), "hand-kick rhythm" (freestyle), "kicking with both feet at same time" (butterfly) and "raising head along with body" (breaststroke). Swimmers were asked to rate each element on a scale ranging from 0 (very poorly) to 10 (excellent). Swimming performance was also rated by a coach. Ratings were repeated by the swimmers and the coach at the end of the six week period. Preliminary results indicate no significant relation between self-efficacy scores and swimmers' perceptions

of improvement. Moreover, a discrepancy between the coach's and swimmers' ratings was found. A degree of similarity-dissimilarity between emotion descriptors generated by swimmers was assessed by calculating content overlap, using the formula proposed by Krahé (1986). Overlap scores vary from 0 (all descriptors across two situations are different) to 1 (all descriptors are similar). Inter-individual content overlap was low for all four emotion categories ($N- M = 0.26 \pm 0.19$, $N+ M = 0.23 \pm 0.19$, $P+ M = 0.19 \pm 0.17$, and $P- M = 0.13 \pm 0.15$). Additional results will be presented as well as some of the challenges faced with the present study design such as data collection and analysis. Future research directions are suggested. Overall, the list of swimming elements proved useful to measure perceptions of improvement. Swimmers used different emotion words to describe their optimal and dysfunctional performance states.

Keywords: *emotional states, Self-regulation, performance, self-efficacy, competitive sports*

Self-generation of stimulus choices in imagery: A reactive or preplanned experience?

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Imagery is often used to practice reactive tasks; however, researchers have explained the difficulty in producing unexpected images. Consequently, imagers may preplan the stimulus and practice only the imagery responses. The current study explored response choices when presented with an imagery reaction time (RT) task and whether participants acknowledged the imagery as reactive. It was hypothesized that participants would generate a similar number of possible response choices and they would report the imagery was preplanned rather than reactive. Fifty participants ($M_{age} = 21.76$, $SD = 1.64$) completed 20 trials of a 2-choice, and 4-choice RT task. Participants imagined the stimulus, responded to it, and then completed a questionnaire on their imagery experience after the experiment. The distribution of response choices was similar for 2-choice RT between the

possible responses of blue ($n = 453$ choices, 45.3%) and green ($n = 479$, 47.9%), with a similar RT (blue $M = 295.71$, $SD = 109.38$; green $M = 295.71$, $SD = 103.188$). The distribution of responses for 4-choice RT was similar between the possible responses of blue ($n = 247$, 24.7%), green ($n = 225$, 22.5%), yellow ($n = 258$, 25.8%), and red ($n = 215$, 21.5%), with a similar RT (blue $M = 299.62$, $SD = 107.53$; green $M = 290.08$, $SD = 92.12$; yellow $M = 293.17$, $SD = 93.94$; red $M = 297.82$, $SD = 107.47$). Most participants ($n = 33$, 66%) reported pre-planning responses prior to stimulus presentation, some participants ($n = 10$, 20%) reported reacting to an unexpected stimulus, and a small number reported a combination of preplanning and reacting ($n = 3$, 6%) or choosing the stimulus randomly ($n = 4$, 8%). There was an even distribution of response choices; however, participants indicated that they preplanned these response choices rather than producing them unexpectedly in the imagery process. This indicates that imagery can be used to practice responses to stimuli, but it may be difficult to generate unexpected events to practice. Future research and applied implications will be discussed.

Keywords: *imagery, reaction time, responses, stimulus, preplanned responses*

Service learning in urban poor communities: A qualitative inquiry

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Educational reforms and advocates for social causes lead us to service learning. Service learning is generally understood as a pedagogy that links academic learning and community interaction. It envisions students to apply theoretical concepts learned in class in addressing community needs and problems. In this paper, we aim to identify the enablers and barriers of service learning. In addition, we examine the consequences of service learning for students and community members. By addressing these aims, we develop a service learning framework within the context of higher education. Service learning projects of three undergraduate courses were considered in the study. A multi-method approach was used including survey questionnaires (derived from

faculty member, university students and community members) and archival records (e.g., syllabus and operation manual for community service). Results showed that a strong curriculum and service articulation, inclusion of reflection activities, and school and community commitment are enablers of a successful service learning project. In contrast, barriers include insufficient service hours, lack of experience among students, and weak curriculum-service integration of faculty members. The study also revealed that service learning experience enhanced academic learning and personal development of students. On the whole, service learning projects were deemed valuable by the community. Findings of the study revealed that service learning projects are beneficial to both students and community members. Success of service learning pedagogy depends on the extent to which faculty members integrate course content with service experience of students.

Keywords: *service learning, learning, community, personal development*

Sexual harassment in the military

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Discrimination and sexual harassment are concerns in all organizations because of their negative impact on morale and productivity; the U.S. military is no exception. One tool that the U.S. military uses to identify risk for Equal Opportunity (EO) violations is The Defense Equal Opportunity Management Institute (DEOMI) Climate Survey (DEOCS). The DEOCS assesses Equal Opportunity (EO), Equal Employment Opportunity (EEO), and Organizational Effectiveness (OE) factors, and is administered by the Department of Defense (DoD). Besides examining members' perceptions regarding equal opportunity issues, the DEOCS allows members to document their personal experiences of discrimination and/or sexual harassment. Using this information, we are able to identify individuals who have personally experienced discrimination and/or sexual harassment in the workplace during the past 12 months. The task of minimizing incidents of

discrimination and sexual harassment is a daunting one. Still, research regarding job attitudes of both victims and non-victims can provide information that might be utilized to reduce these behaviors among military members. The present study aims to identify the combination of job attitudes (i.e., organizational trust, organizational commitment, and job satisfaction) that best distinguishes victims from non-victims, based on participants' pattern of responses to the DEOCS' organizational trust, organizational commitment, and job satisfaction climate factor scales. Using discriminant analysis we are able to determine the most parsimonious combination of job attitudes that distinguishes between the two groups, while eliminating those variables that fail to distinguish them. The results of this study can be used to better understand what combinations of attitudes are prevalent among individuals that have experienced discrimination and/or sexual harassment, as well as those who are not the object of these acts. Ultimately, this information, in conjunction with future research, could be utilized to identify high risk groups and/or inform and leverage the development of organizational reparation initiatives in order to reduce the long-term damage that EO violations can have on individual members and organization morale. This study utilized a sample of more than 10,000 military members that completed the DEOCS. Results and further implications are discussed.

Keywords: *discrimination, sexual harassment, equal opportunity, job attitudes, victim*

Simon-like and functional affordance effects with tools

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There is a perception that an object stimulus influences our motor behavior even when we have no intention to act on it. It has been observed that left/right responses to spatial stimuli (e.g. arrows) are faster when they correspond to their task, irrespective of left/right orientation, compared to when they do

not (Simon-like effect; Pellicano, Lugli, Baroni, & Nicoletti, 2009). Similarly, left/right response results are faster when they correspond to the spatial orientation of the graspable portion of an object tool (Tucker & Ellis, 2004), due to reach-to-grasp actions being activated toward the handle (affordance effect). In the present study, a stimulus-response correspondence paradigm was employed to investigate whether two spatially opposite features of the same tool (i.e., the goal-directed and the graspable portion of a torch) can generate both effects as a function of the task at hand. The stimuli were pictures of horizontally displaced electric torches depicted as switched-on (active-state) and switched-off (passive-state). Participants responded to the color (Experiment 1) or to the vertical, upright/upside-down orientation (Experiment 2) by pressing a left or right key. They had to ignore the torches' horizontal orientation and functional state. In Experiment 1, a corresponding Simon-like effect was observed, irrespective of the functional state, between the position of the tool goal-directed portion and the position of the response. In Experiment 2, a corresponding affordance effect was found between the position of the tool handle and the position of the response. However, this effect was evident only in the active-state and was absent in the passive-state condition. Tools can be coded as a function of their goal-directed tip and thus interpreted as "pointing to a direction", similar to arrow symbols. This only occurs if simple perceptual processing is performed, as for the color discrimination task. On the other hand, affordances (and the coding of tools as a function of their graspable portion) seem to depend on detailed processing of shape, as for the vertical discrimination task. Furthermore, they are selectively activated if the functional meaning of tools is highlighted, providing evidence that they consist of specific motor simulations of appropriate grasp-to-use actions directed towards the handle.

Keywords: *Simon-like effect, spatial stimuli, functional affordance effect, motor behavior, reach-to-grasp action*

Situational and gender consistency of risk-taking behavior in daily life

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Although there are many studies about the situational consistency of risk-taking behavior, in Japan, few studies have such behavior in numerous situations in daily life. Many studies suggest that men take more risks than women, but we cannot simply conclude that is true because some studies suggest the opposite result. Thus, the aim of the present study is to test whether risk-taking behavior is consistent across several situations, and to identify situations in which no gender difference is suggested. We generated 50 items governing risk-taking behavior in daily life. These 50 items were categorized into five situations (traffic, health, financial, social, and crime prevention). One hundred and ninety-seven undergraduate and graduate students (119 male, 77 female, and 1 unclear) assessed these items on a five-point scale. To test the consistency of risk-taking behavior in daily life, the mean rating of each situation was calculated and the correlation was analyzed. Results indicated significant relations across situations, but the degree of the relations differed. In particular, the relation between traffic and health categories was weak. Furthermore, independent t tests demonstrated that men take more risks than women in health, financial and crime prevention situations, but differences in traffic and social categories were not significant. One-way analysis of variance (ANOVA) indicated that the risks in health and crime prevention situations were easier taken among the five situations. Although risk-taking behavior is consistent across several situations in daily life, relations between those situations were not necessarily strong. Other factors may thus influence risk-taking behavior as well as the situation. Furthermore, there was no significant gender difference in social and traffic situations. Many previous studies indicated that men take more risks than women, but in reality, this is not so simple. In addition to these suggestions, the result of ANOVA may indicate that the costs related to health and criminal risk are underestimated in daily life. Therefore, further studies are needed to verify the factors that affect situational and gender differences of risk-taking behavior in daily life and the related risk assessment.

Keywords: *risk taking, daily life, situational consistency, gender*

Size perception bias in social anxiety: Evidence from emotional facial expressions

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Social anxiety disorder (SAD) has negatively biased processing of social information. Especially individuals diagnosed with SAD have been found to selectively attend to negative faces and other threatening social stimuli. SAD studies indicate that high-social anxiety individuals (HSAs) show more attentional bias especially toward angry faces (threat-related cues) relative to neutral and happy faces than low-social anxiety individuals (LSAs). Moreover, visual search task studies show that anxious individuals identify angry faces faster than happy faces. Studies have shown that motivational or affective stimuli can influence perception. These studies have proposed that negatively loaded stimuli loom larger than positively loaded or neutral stimuli, suggesting that negatively loaded stimuli are more attentionally demanding or motivationally salient compared to positive and neutral stimuli. Therefore, we hypothesize that HSAs will perceive threat-related stimuli (angry facial expressions) as larger than positive (happy facial expression) and neutral stimuli of the same size. Participants will be screened and divided into 2 groups (HSAs, LSAs) using the Social Avoidance and Distress Scale (SADS) and the Beck Depression Inventory (BDI). Before and after the task, participants will complete the State-Trait Anxiety Inventory-State Form. Three emotional facial stimuli (angry, happy, neutral) in three different ellipse sizes will be presented randomly in pairs. All participants will be asked to attend to a fixation cross for 500 ms at the start of each trial. They will then be presented with a pair of stimuli for 2000 ms and decide whether one is larger or the same, as quickly and accurately as possible, by pressing a key on a keyboard. After the task, participants will evaluate the emotional facial stimuli by rating their emotional valence (-2 (very unpleasant) to +2 (very pleasant)) and arousal levels. As this study is currently in progress, we predict that HSAs will have lower perceptual sensitivity and

will perceive angry facial stimuli as larger than neutral and happy facial stimuli compared to LSAs. These results would suggest that perception sensitivity in social anxiety is affected by the processing of threat-related information.

Keywords: *social anxiety disorder, social information processing, perceptual sensitivity, emotions, threat-related information*

Social comparison orientation of college athletes and the relationship with sport trait anxiety

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The purpose of this study is to investigate the status of social comparison among college athletes, and analyze its relationship with sport trait anxiety. A convenience sampling method was adopted to collect data, and the participants were 260 college student athletes and 60 undergraduate students from Beijing. The social comparison was examined by Social Comparison Scale, and the sports competition anxiety was measured by Sports Competition Anxiety Test". Results are as follows: (1) There is no significant difference between college athletes and the ordinary university students in social comparison orientation, however, (2) Social comparison orientation in female college students athletes is significantly higher than that of males; (3) There is no significant difference in social comparison orientation between athletes of the collective project and the individual project; (4) Social comparison of performance-based projects athletes is significantly higher than that of confrontational items. (5) Social comparison orientation is positively correlated with sports competition anxiety. There is no significant difference for social comparison orientation between college athletes and ordinary undergraduate students; Female college athletes showed more social comparison orientation than that of males. Social comparison orientation is positively correlated with sports competition anxiety, and it could predict sports competition anxiety.

Keywords: *social comparison, athletes, sport trait anxiety, sports competition anxiety, social comparison orientation*

Social-psychological model of brand-communications

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The formation and approbation of the social-psychological model, corresponds to modern tendencies of the brand communication development. The efficient brand-communication concept is systematized within the said model. The methods applied in the course of this research were a questionnaire poll, expert interviewing and discourse analysis. Within the model, the brand-communication is represented as a three-dimensional one, the axes of which are the brand image, personal sense and conventional sense. The brand-communication model levels are disposed on the basis of the efficiency principle. At the first (lowest) level of the brand-communication model the image of the brand plays the most important part. The other two are less significant compared to it. The level brand communication model is linear. At the second level, the value (component) of the personal sense arises, together with the image, while the conventional sense is insignificant. At the third level, together with the image and the personal sense, the conventional sense, formed in the personal and group communication and under the influence of the mass communication, is enhanced. The brand-communication efficiency is increased, going from the lower to the upper level. The units (empiric referents) are the arguments, which are distributed through the model axes. The conventional sense is formed under the influence of the explicit arguments, the personal sense is formed under the influence of the implicit arguments, and the brand image is formed under the influence of the sum of all arguments. Brand-communications are special types of social communications, which can be represented as a three-level structure model. The social-psychological model suggested is the instrument to study the brand-communications efficiency.

Keywords: *brand-communication, social-psychological model, brand image, personal sense, conventional sense*

Sociometric analysis of groups in schools

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Sociometric tests have become a very used instrument in different social areas; computer programs developed up until now scarcely exploited all its possibilities because these programs only analyze a limited number of indexes (generally related to elections, rejections and indifferences). The program of software described in this paper considerably extends the previous calculations, adding values and indexes related to perceptions (of elections and of rejections) and to group contexts (group structure and relation subject-group), and it likewise allows elaborate different graphics (sociometric distance and sociograms of election, rejection, and perception of election and of rejection).

Keywords: *sociometric analysis, schools, election, rejections, software*

Some factors affecting psychological adjustment and wellbeing of Indian gay and bisexual youths

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Homosexuality and homosexual behaviors are still considered unnatural, inhuman, unethical and a punishable offence under the law. Various forms of homophobia towards homosexual activities also exist. The present study investigated which factors/variables were related to the psychological adjustment and wellbeing of gay and bisexual youths in India. A total of 136 gay and bisexual youths participated in this study and were aged between 16 to 26 years, with a mean age of 20.8 years. In terms of education, 13.97% participants completed primary education, 16.91% completed secondary education, 35.29% completed high school and higher secondary education, and 33.82% completed college education. In total, 25.74% of participants were reared in and/or resided in

rural areas (i.e., villages and small towns), while 74.26% participants were from urban areas. A special 49 item Interview Schedule was developed for this research. As a part of this structured interview, the participants were also requested to evaluate their feeling about their sexual orientation from extremely unhappy and unsatisfied to extremely happy and satisfied, their feeling of psychological well-being from extremely displeased to extremely pleased, and their feeling of psychological strength from lot of psychological problems and extremely weak and unadjusted to no psychological problems and extremely strong and adjusted. Participants were also requested to clearly select the options regarding 'who knows your homosexuality/bisexuality' or 'to whom you have disclosed your homosexuality/bisexuality'. The results showed that those gay and bisexual youths with higher education, residing in urban area, having memberships in gay organizations, and having disclosed their homosexual and bisexual orientation to others have more positive gay and bisexual identity and more positive psychological adjustment compared to those with lower education, residing in rural areas, having no memberships in gay organizations and not having disclosed their homosexual and bisexual orientation to others. Therefore, the level of education, the area of residence, the membership in gay organizations and self-disclosure of gay and bisexual orientation are related to the psychological adjustment and wellbeing of the Indian gay and bisexual youths.

Keywords: *homosexuality, gay, bisexual, sexual orientation, psychological adjustment*

Sport, general health and marital satisfaction: Between athletes and non athletes

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Health is one of the most important issues in the world, even physically and psychologically. Nowadays people seek special ways to keep their health and of course to promote it, including using drugs, good nutrition, healthy life style etcetera. The purpose of this study is to consider the role of sport and exercise on health

and marital relationships. Our sample contains 120 individuals aged between 30 to 45 years, who were divided into the two groups of athlete and non athlete. They were asked to fill out the General Health Questionnaire (GHQ), and Marital Satisfaction Inventory. Analysis was prepared using SPSS. Outcomes demonstrate that athletes have less anxiety, depression, dysfunction in social positions and physical symptoms in comparison to non athletes ($p = 0.01$). There was no difference in marital satisfaction between two groups. In comparison, athletes have better conditions in all of the items in GHQ and also males had a higher healthy physical condition than females. Sport improves the satisfaction of the relationship but not to a significant measure.

Keywords: *general health questionnaire, marital satisfaction, sport, physical health, exercise*

Stratified person-job match for effective online career development

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Work and life satisfaction depends significantly on the extent to which individuals find opportunities to act out their abilities, needs, values, interests, personality traits and self-concepts. A successful career requires three crucial elements: 1) Knowledge about oneself; 2) the knowledge of the challenges and chances of various professions/jobs; and 3) a stratified person-job match on the principle of best and most effective fit. The evaluation of an online career development portal is presented ($N=43,287$) that is based on these principles. For every participant the online self-assessment of abilities, personality, interests, values and learning styles is matched with the characteristic patterns of approximately 1,000 jobs (based on the O*NET® content model). This allows a three-step process (according to Gati, 2006) including: 1) pre-screening and a shortlist of potential jobs; 2) in-depth exploration of options; and 3) choice of option with direct online application or booking of required training.

Keywords: *job satisfaction, success, career development, personality, learning strategies*

Stress and well-being in first year students of psychology

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The first year at university is a challenge for students due to the new teaching methods, new requirements, new environment, and increased independence. In 2009 the Department of General Psychology of Vilnius University began a longitudinal study. In the first part of this study we analysed psychological well-being of first year students of psychology. The main purpose of the research was to identify the main factors, influencing the psychological well-being of students and clarify peculiarities of students stress. 76 first year students of psychology (62 female and 14 male, mean age = 19.08 years) participated in this study. Specially designed questionnaires using Likert scales intended to reveal different aspects of stress, Ryff's scales of psychological well-being was also used in the research. The results of study, as expected, showed a significant relation between stress and psychological well-being of first year students. We identify the most stressful areas of student's life. Relatively high level of stress in first year students, also peculiarities of their psychological well-being was linked with necessity to adapt to the new learning and living environment.

Keywords: *university, psychological well-being, university students, psychology, stress*

Stress increases fatigue in dental students, while fatigue in turn increases their worry about developing musculoskeletal problems

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The understanding of university students, especially in programs with clinical practice, is not covered by classical educational psychology and will benefit from a work-environment approach. In this study, we hypothesized that perceived stress (PS) would increase the students' weariness in their neck and shoulders (Weary neck), as well as their Fatigue (feeling fatigued in a way that limits what you manage to

do after school hours). PS was expected to be influenced by ergonomic factors, such as assistance and the possibility to adjust and organize the clinical workplace when treating patients (Ergonomics), and students' worries about developing musculoskeletal problems (Worry). A web-survey was distributed to all (850) Swedish dental students of which 50 percent answered the survey, a percentage in line with corresponding Swedish surveys. A Structural Equation Modeling (SEM) analysis was conducted on the data (Chi-square = 448,519; df = 228; p = .000; Normed Chi-square = 1,967; RMSEA = 055). Our analysis shows that Ergonomics influences PS (men = -.25; women = -.34) as well as Fatigue (-.25). PS in turn also influences Fatigue (men .41; women .44). Fatigue increases Weary neck directly (men = .47; women = .42), as well as indirectly by influencing Worry (men = .49; women = .67) which in turn influences Weary neck (men .31; women .29). None of the gender differences were significant. Dental students' weariness in neck and shoulders is clearly related to both psyche and soma. However, dental students' worries about developing musculoskeletal problems seems to be based on their feelings of fatigue and only indirectly by their perceived stress. This indicates that both male and female students are already bodily, as well as mentally, aware of the strain their chosen profession puts on their physique.

Keywords: *perceived stress, ergonomics, fatigue, worry, structural equation modeling*

Stress management training: A good treatment for anxiety, but not for hypertension

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Psychological treatments for hypertension have at best received mixed support from empirical studies and expert panels. The aim of this study was to examine the effects of stress management training (SMT) on clinic, ambulatory and self-measured blood pressure (BP) measures, and also on psychological

measures (anxiety, depression, anger, and stress). Preliminary results were obtained from a controlled trial examining SMT for hypertension. Twenty patients with essential hypertension were randomly assigned to a treatment group and treated with an individual program based on relaxation and problem-solving training ($n = 12$), or to a waiting list control group ($n = 8$). At pretreatment and post-treatment (8 weeks) stages, six clinic, 24 self-measured and 65 24-hour ambulatory Blood Pressure (BP) readings were obtained in all patients. At both stages, all patients completed questionnaires assessing anxiety [the Beck Anxiety Inventory (BAI) and the anxiety subscale of the Hospital Anxiety and Depression Scale (HADS-A)], depression [a short form of the Beck Depression Inventory-II, BDI-II], trait anger (the trait anger subscale of the State-Trait Anger Expression Inventory-2, STAXI-2), and stress (the short version of the Survey of Recent Life Experiences, SRLE). Time and group interaction effects were examined using 2x2 repeated measure ANOVAs and, when significant, pre-post Wilcoxon signed-rank tests were calculated for each group. Results indicated that the mean scores for anxiety, as measured by the BAI and the HADS-A, were significantly decreased after the SMT program in the treatment group as compared to the control group (time-group interaction effects were significant with $p = .027$ and $.005$, respectively). No similar effects were observed for clinic, ambulatory or self-measured BP measures, or for depression and stress measures (all time-group interaction effects were not significant with $p > .05$). The time-group interaction was also significant for trait anger ($p = .028$), but it reflected an increase in STAXI-2 scores in the control group. Results do not support the efficacy of STM for reducing BP, but support its efficacy for reducing anxiety, and suggest that STM could be a complementary therapy to an efficacious antihypertensive therapy for patients with hypertension who report a great deal of negative emotions.

Keywords: *hypertension, stress management, anxiety, depression, anger*

Study and comparison of the relationship between learning styles and the educational performance in 3rd grade female students of the government and top government high schools, Kashmar, Iran

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This research has been conducted to compare the relationship between the learning styles and the educational performance of 3rd grade female students of government and top government high schools in Kashmar, Iran. For this purpose, 250 female 3rd grade high school students (150 from government schools and 100 from top government schools) were randomly selected by adopting the taxonomic cluster method. Learning methods (objective experience, contemplative observation, abstract thought and active testing) and learning styles (homogeneous, heterogeneous, comparative and attractor) were assessed using Kelps questionnaire. Dortaj's educational performance questionnaire was also applied to study self-efficiency, emotional effects, programming, lack of controlling consequence, and motive. The collected data was analyzed using the following statistical methods: comparative correlation, Khido's statistical test, multivariate variance analysis and LSD pursuing test. The results suggest that only programming and lack of controlling consequence are meaningfully inter-related with learning style among characteristics of educational performance. The difference between the two groups studied was significant, and learning style in top government schools was mostly heterogeneous, whereas it was comparative in ordinary schools. No meaningful relationship was observed between the educational performance of students in government schools and top government schools. The findings revealed that learning styles of students in the fields of math, experimental science and humanities were heterogeneous, attractor and comparative respectively, and the difference in terms of self-efficiency among these three fields was meaningful, but no difference was observed in comparison with other characteristics of educational performance.

Keywords: *learning strategies, educational performance, female students, learning methods, Iran*

Supervisors' behavior inhibiting trust in the expertise and trustworthiness that subordinates have in supervisors

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In the workplace, the improvement of productivity, to say nothing of group maintenance, are common goals. It is important that the instruction system based on the divide of work between supervisor and subordinate functions well for the improvement of productivity in the workplace. However, there are power differences caused by differences of position and authority between supervisor and subordinate. The power differences influence the process of both supervisor and subordinate in creating a relationship where both can trust each other, and we believe there are differences between the process of a supervisor trusting a subordinate and the process of a subordinate trusting a supervisor. To look at trust from the viewpoint of expertise and trustworthiness, firstly, we examined supervisors' behavior promoting trust that subordinates have in supervisors in order to understand how they create mutual trust in the relationship between supervisor and subordinate where power differences exist. In the present research, we examined their inhibiting factors. We adopted a semi-structured interview method, asking employees questions such as "do you think you cannot trust the supervisor's expertise or trustworthiness based on the supervisor's behavior?", and "do you think supervisors cannot trust you based on behavior in expertise or trustworthiness?". We classified the obtained remarks into respective categories. As a result, firstly to describe the behavior inhibiting trust in trustworthiness that subordinates have in supervisors, the remarks were classified into nine categories and a few labels. To describe their expertise, they were classified into four categories and a few labels. On the other hand, to describe the behavior inhibiting trust in trustworthiness that subordinates think supervisors have in them, the remarks were classified into one category and a few labels, and

to describe their expertise, they were classified into five categories and a few labels. We discuss the contents of supervisors' behavior inhibiting trust that subordinates have in supervisors. However, as there are promotion factors, we need to discuss each original or common factor.

Keywords: supervisors, trustworthiness, subordinate, power difference, expertise

Surveying the role of religious orientation in mental health and happiness in seniles

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Religious orientation can be understood in terms of two dimensions: extrinsic religiosity and intrinsic religiosity. Those with an "intrinsic religious" orientation dedicated their life to God or a higher power and reported they were less afraid of death and experienced greater feelings of well-being, happiness and mental health than people who fit into the "extrinsic religious" category of using religion for external ends, such as a way to make friends or increase community social standing. Eighty senile people aged between 50-70 years were randomly selected and Allport's religious orientation scale (AROS), Argyle's happiness inventory (AHI) and General Health Questionnaire (GHQ) were administered to them. Pearson correlations were used for analyzing the data. Findings showed that there is a negative and significant correlation between intrinsic religious orientation and components of mental illness, positive and significant correlation between extrinsic religious orientation and components of mental illness, negative and significant correlation between components of mental illness and happiness. In seeking of satisfaction and happiness of / in life people choose some ways. One of the most ways is being religious and religious orientation. In religious orientation, people with intrinsic religious orientation tend to have internal value and a personal relationship with God and this attitude makes them hopeful in life and makes them happy in every time of life. People with extrinsic religious orientation tend to be religious for getting the situation and prestige and social confirmation. When they do not reach

their goals they are disappointed especially in during the aging period and get depressed.

Keywords: religion, attitudes, happiness, mental illness, depression

Survive in the other battlefields: Can at-risk children be more resilient on certain developmental domains?

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This study examined two questions that Luthar, Cicchetti, and Becker (2000) suggested to the future research of resilience. The first question is when multiple outcomes are assessed, whether these should be examined separately or somehow integrated? The second question is when multiple outcomes are considered separately, are some of these accorded more importance than others as the most critical indicators of resilience? This study is part of an ongoing project that aims to assess risk and protective factors for preschool children adjustment. The final sample consisted of 827 children, 68.2% were boys, and the age range was 1.82-7.90 ($M = 5.59$, $SD = .99$). We used the Children's School Readiness Scale (CSRS) as the measure of children's developmental outcomes, and used the Children's Developmental Risk Factors Checklist (CDRFC) to identify the children's risk factors in development. The CSRS has 7 subscales; the Cronbach's alphas range from .84 to .92. The CDRFC has 3 subscales, which are Individual Characteristics, Parenting Processes, and Environmental Context. The Kuder-Richardson 20 coefficients of each subscale are .73, .63 and .77. First, we used hierarchical cluster analysis to see what kinds of combinations of developmental outcomes are more sensible. According to this solution, we created five composite scores. Then we used risk and development as two dimensions to separate children into four groups; resilient, vulnerable, maladjusted, and normal. When multiple outcomes were examined, some separate domains had more children classified into the resilient group, the integrated domain. On the other hand, there still existed some domains which had more children classified into the vulnerable group. Finally, we estimated the odds

ratios of high-risk to low-risk children on multiple developmental domains. Most integrated domains have higher odds ratios (2.24-6.01, $M=4.82$) than separated domains (1.99-5.28, $M=3.34$). To conclude, the current study also provides evidence that children's resilience can be seen in many different situations, they could be individual domains, or could also be combinations of some domains. In future studies, more models about children's resilience should be considered and examined by using multiple developmental outcomes in both separated and integrated ways.

Keywords: *resilience, adjustment, developmental outcomes, preschool children, integrative domains*

Teacher and non-teacher perceptions of relative secondary teacher status

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The aim of this study was to determine the status cues used by teachers and non-teachers to make judgments about the relative status of secondary teachers. The paper is comprised of three studies. In the first and second studies, secondary teachers generated and rated the status cues used to make judgments about the relative status of their teaching colleagues. In the third study, a group of teacher and non-teacher participants were presented with vignettes in which four status indicators were systematically manipulated. Half of the questionnaires used a masculine pronoun to describe the hypothetical teacher, and half used a feminine pronoun. Significant main effects were found between each of the four status indicators, with each of the high status indicators (eg. Own office) being rated as higher status than its low status partner (eg. Shared office). There were differences in the perceived status of each of these indicators between teacher's ratings and non-teacher's ratings. A number of two-way interactions between the four indicators were found, with teachers having one high status and one low status indicator often being rated as having lower status than teachers with two low status indicators. There were no significant differences in status whether the hypothetical teacher was described as male or female. It was found that both teachers and

non-teachers use a number of cues to make judgments about the status of individual secondary teachers. Teachers and non-teachers differ in their perceptions of how much status each indicator confers on an individual, but agree in their perceptions of what constitutes high and low status on each indicator. Future research should focus on whether teachers provided with high status opportunities, eg. their own office, feel a corresponding increase in status, or whether these indicators only continue to confer status as long as they remain a scarce resource.

Keywords: *secondary school, status, vignettes, teachers*

Teachers' responses to children with and without the label "ADHD"

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This project aimed to examine whether elementary-school teachers' perceptions, emotions, and behaviors differed for children with inattention and hyperactivity-impulsivity as a function of whether or not they are labeled as having "ADHD." The secondary question addressed in this study was the contributions of teachers' professional backgrounds in predicting the extent to which they were influenced by the presence versus absence of an "ADHD" label (i.e., showed a "label bias"). Thirty-four teachers rated their emotional and behavioural reactions towards vignettes describing children who met attention-deficit/hyperactivity disorder (ADHD) symptom criteria that included or did not include the label "ADHD." Vignettes labeled with "ADHD" elicited more negative emotions, less confidence in working with the child, and increased perceptions of the child's impairment, but also increased participants' willingness to help professionals implement treatment interventions. We also examined whether teachers' experience teaching students with ADHD and/or teachers' training specific to ADHD predicted the degree of bias shown to vignettes that included an "ADHD" label. Although little effect of experience was found, training specific to ADHD reduced label bias. Our findings point to a significant impact of the ADHD diagnostic label on teachers' reactions. Given that negative

first-impressions are resistant to change, introducing this label at the start of a school year might be cause for concern. Finally, that training specific to ADHD reduced much of this bias indicates that in-service ADHD training may help alleviate some of the negative perceptions that are engendered by the label of “ADHD.”

Keywords: *Attention Deficit Hyperactivity Disorder, teachers' responses, children, label bias, teacher development*

Testing for measurement equivalence of IPIP across online and paper-and-pencil surveys

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Recently, online surveys have become more popular where a lot of psychological investigations are based on questionnaires now implemented in online surveys. Researchers are used to prepare paper-and-pencil version for online conditions. But there is implicit assumption, that these two versions – offline and online – are equivalent. An equivalence of these two version scale is a sine qua non condition of comparing results from two sources of data collecting and including new results into scientific knowledge. This assumption needs to be empirically verified. 1118 participants completed paper-and-pencil versions and online surveys on a special website. A short version of IPIP questionnaire is taken from Goldberg's International Personality Items Pool, which corresponds to FFM. This is a 120-items version with five scales and 30 subscales. For all calculation we have used AMOS 17 software. Measurement equivalence was provided in a framework of multigroup confirmatory factor analysis. This procedure was used for each dimension of personality measurement: extraversion, neuroticism, agreeableness, consciousness and intellect. The results support the hypothesis that more deeply invariance measuring did not allow the researcher to take into account assumption about equivalence. The MGFCM measure invariance of IPIP scale at three levels (configural, metric and scalar), where each of them are supposed to meet some rigid value. During the analysis some items need to be

exchanged to prepare an invariant version of IPIP questionnaire – in short version. The procedure of invariance measure allows the researcher to build scales that can be use online and offline version as well.

Keywords: *online surveys, paper-and-pencil surveys, IPIP questionnaire, personality measurement*

Testing of decision-making in field hockey: A comparison of static and dynamic screen versions

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In team sports, such as hockey, quick and accurate decision-making is vital, so being able to accurately test decision-making is important. If a decision-making test is to be effectively used in sport, it is important that the test is valid and reliable, can distinguish between expert and non expert players, and can be completed relatively quickly. Dynamic video sequences take more time to complete than static screen captures, but may be more ecologically valid. Therefore, the aims of this study were to develop a screen based test of decision making in hockey and compare the validity and reliability of a static and dynamic version of the test. This is the first study to directly compare static and dynamic presentation stimulus on a screen based test. Video-footage was used to create 80 test items that were assessed for content validity by a panel of coaches, which allowed the number of test items to be reduced to 50. The screen-based tests were then completed by 210 participants with an average age 20.45 +/- 4.75 years from various sports and levels of hockey. Item difficulty, item –to-total correlation, and a between group comparison of scores for experienced and inexperienced hockey players to determine item-difficulty were used to reduce the number of items for each test from 50 to 25 items. Test-re-test reliability of the final 25 items was also assessed by having some participants complete the tests again 1 week later. The dynamic test was able to adequately discriminate between experience levels, $F(1, 208)=17.15$, $\eta^2 = .076$, $p < .001$, and appeared to be somewhat internally consistent ($\alpha = .59$). The static test was able to adequately discriminate

between experience levels $F(1, 208) = 32.26$, $\eta^2 = .134$, $p < .001$, and appeared to be somewhat internally consistent ($\alpha = .63$). To conclude, the tests had good discrimination, good test re-test reliability, and acceptable internal consistency, however, the static presentation displayed fractionally better psychometric properties than the dynamic presentation. This is in contrast to the expectation that dynamic presentation would provide more ecologically valid testing. More research is needed on the applied use of decision-making tests in sport.

Keywords: *decision making, hockey, validity, reliability, screen-based test*

Thai youth's perception on sustainable development: A case study of Muay Thai

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Muay Thai, or Thai boxing, has been the Thai people's favorite form of martial arts throughout the nation's history. Practice was aimed either to win over the enemy or to self defend. Muay Thai training became a popular and, in certain sense, compulsory sport, leading to the establishment of an amateur association of Muay Thai more than hundred years ago. The global community has been gaining popularity; Muay Thai became a favorite martial art worldwide. However, since the sport is fighting based, the parents of Thai youth then discouraged their children from engaging in such a violent activity on the assumption of a negative attitude towards Muay Thai. Actually, this mentality was based on the belief that Muay Thai is a necessary art for good livelihood for the poor, i.e. Muay Thai is a bread winning job of children from poor families in about the same manner as in other countries, but on the apprehension that their children would be at risk of serious injury or death. While Muay Thai as a martial art proved to be Thailand's valuable heritage, all the negative beliefs should not be held by Thai youth. Muay Thai might be taking a down turn in the near future. Compared with the international fighting sports, however, it was found that Muay Thai in perception of the new generation seem to lack clear development directions. In understanding the real perception of Thai youth towards Muay

Thai, we proposed a vision for the sustainable development of Muay Thai. The research was to investigate the attitude and perception of the Thai youth towards Muay Thai, and to find ways to make it a professional sustainable sport for Thailand.

Keywords: *Muay Thai, perception analysis, sustainable development, Thailand*

The affective consequences of working with others: Social interaction as an antecedent of affect at work

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In recent years, theory on affect in the workplace has increasingly focused on the factors that account for within-person fluctuations in affective experience. The present study examines the impact of workplace interactions on affect at work, the psychological processes through which workplace interactions influence momentary affect and individual differences in the extent to which this relationship occurs. The participants were 185 managers from five large Australian companies. Participants completed a three-week experience sampling activity in which they responded to short questionnaires on handheld computers up to five times each workday. The items sought information about the people they were interacting with, the tasks they were completing and their affective states at the time of the signal. The data were analysed using hierarchical linear modeling. The results indicate that the typical individual experiences higher levels of both positive affect and negative affect when interacting with others compared to when working alone. These effects are accentuated when the individual is interacting with a supervisor compared to interactions that do not involve a supervisor. Furthermore, these effects are largely mediated by perceptions of the tasks people work on either individually or with others. Workplace interactions account for a significant amount of the fluctuations in positive affect and negative affect that occurs at work. We discuss the implications of our findings for theories of workplace affect. We also consider

how our results relate to issues about the dimensionality of affective experiences.

Keywords: *working with others, social interaction, affect, workplace interactions, affective consequences*

The antecedents and outcomes of creativity measured by Abbreviated Torrance Test for Adults (ATTA)

PENG, L. (Peking University), PENG, L. (Peking University)

This study attempted to examine the antecedents and outcomes of creativity measured by the Abbreviated Torrance Test for Adults (ATTA). Five Factor Model of personality (FFM) was presented as an antecedent, and supervisor's rating of employee innovation behavior was tested as an outcome. This is the first time measuring individuals' creativity by using a test in a field study. Our goal was to investigate if FFM could influence an individual's creativity and innovation behavior, and whether creativity could predict employee innovation behavior. The study was conducted in a field setting. Participants were employees from the research and development department of a Chinese organization. Employees first finished the ATTA in a limited time, then filled out a questionnaire that included items measuring big five factors of personality and demographic information. On a separate rating form, each employee's supervisor rated the employee's innovation behavior. The results of ATTA were scored in three different dimensions: fluency, flexibility, and originality. The five dimensions of FFM, that is, extraversion, agreeableness, conscientiousness, emotional stability, and openness, were also scored independently. Correlation analysis revealed that both agreeableness and openness had significant positive correlations with fluency, flexibility, and originality ($p < .05$) they also had significant positive correlations with supervisor's ratings of innovation behavior ($p < .05$). Conscientiousness had significant positive correlations with fluency and flexibility ($p < .05$). In addition, emotional stability exposed a significant positive correlation with fluency ($p < .05$). The originality in ATTA correlated with supervisor's rating of innovation behavior significantly in a positive

direction ($p < .05$). The present study shows that personality can predict creativity and creativity can in turn predict innovation behavior. Although creativity and innovation are believed to be cognitive activity, the personality seems to play a role in influencing these cognitive activities.

Keywords: *big five model of personality, creativity, innovation, emotional stability, originality*

The appeasement behaviors in social transgressions: The functions of emotional expressions and the moderator of emotional intelligence

SASAKI, M. (Meiji University)

This experimental study investigated the functions of emotional expressions to examine how anger disturbs reconciliations, and how embarrassment facilitates reconciliations, in social transgressions. We explore emotional intelligence as a moderator of the psychological processes involved in social transgressions. In Experiment 1, 120 participants, non-students, ranging from the thirties to the fifties, viewed DVD images, in which we improved the situations of social transgression as well as the transgressors' emotional expressions. The factorial design was emotion 2 (anger/embarrassment) x stimulus person 2 (male/female) x scenario 2 (workplace/neighborhood), which equated to 8 conditions. Two stimulus persons (male and female) are shown in the DVD images. Each DVD-condition offers two scenarios; one shows the social transgression in a workplace (male/ female), and the other in the neighborhood (female/male; vice versa). The participants were assigned to a particular DVD-condition and asked to view the scenes repeatedly. Then, they firstly rated the stimulus person's emotions and secondly self-rated their motivation for appeasing or punishing the stimulus person. Experiment 1 indicated that the social transgressors' expressions of embarrassment facilitated the decoder's reconciliation, and also indicated that the expressions of anger facilitate the decoder's avoidance to the expresser. The results suggested that emotional expressions in social transgressors repair or deteriorate the stressful

relations of the dyads, that is to say, there can be seen appeasement behaviors in social transgressions. As we are interested in individual differences in appeasement behaviors, we designed Experiment 2 in order to elucidate certain kinds of emotional intelligences as moderators in the appeasement process. Experiment 2 was conducted using the same scenarios of Experiment 1, to which emotional intelligence was now added. We hypothesized that emotional intelligence moderated the appeasement behaviors in the social transgressions. The results will be discussed in this congress.

Keywords: *social transgressions, anger, embarrassment, emotional intelligence*

The application of psycho- social theory in the process of treating a delinquent girl

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There are various factors that affect a juvenile's psycho- social health and create abnormal behaviors. In this case study, is a fourteen year old girl, who has abandoned her family, uses drugs, has attempted to commit suicide, experienced several incidences of self harming, given up schooling, and who has several sexual relationships. Her treatment process starts in multiphase. The aim of this study is to use the psycho- social methods for treating. This study is a case study that uses all of the following dimensions of social, psycho, family and physiologic. The treatment was based on recognizing the problem and patient and the careful recognition and definition of abnormal behavior. The method was based on methods of change and improvements, and when applied, aims at illuminating undesirable behaviors and creating desirable behaviors. Other methods have been used as well; direct and indirect methods, protective and guide techniques, cognition treatment based on self ordering and problem solving methods. These optimistic results have made an improvement to the family's status; to welcome the young girl. By illuminating abnormal behavior and logical thinking in lieu of impulsive behavior, eventually, an optimum role was achieved.

Keywords: *psycho-social treatment, abnormal behaviour, impulsivity, logical thinking, females*

The association of rumination and spiritual well-being with depressive symptoms among adults: The applicability of resiliency models

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Depression is a significant mental health problem for Australian adults, particularly women. Throughout the literature, rumination has been identified as a cognitive risk factor for the experience of depression and spiritual well-being has been recognised as a protective factor. This study examined the applicability of the direct effects models, and the compensatory, the risk-protective, and the protective-protective models of resiliency, for the prediction of depressive symptoms from the risk factor, rumination, and the protective factors of existential and religious well-being. A sample of 330 adults aged between 18 and 65 years, including 178 women and 152 men (M Age = 35.72, *SD* = 13.80), completed the Centre for Epidemiologic Studies–Depression Scale, the Ruminative Thought Style Questionnaire and the Spiritual Well-Being Scale. Results indicated that when existential well-being was the protective factor, the compensatory model was supported for both women and men. In contrast, when religious well-being was the protective factor, the compensatory model was supported for women only. Results also supported the protective-protective model for women only, with the relationship between rumination and depressive symptoms generally weakening as the number of protective factors increased. Results implied that rumination was a risk factor for depressive symptoms. Further, interventions aimed at increasing existential well-being may be beneficial for men, whereas interventions aimed at increasing both existential well-being and religious well-being may be beneficial for women.

Keywords: *depression, resilience, cognitive risk factors, rumination, spirituality*

The clinical application of reminiscence for suicidal older adults

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Older adults have a higher suicide rate than any other segment of the population in many countries, including the United States of America and Australia. The design of effective suicide prevention strategies for older adults hinges on the identification and treatment of specific risk factors. Hopelessness, suicidal ideation and depression are risk factors for suicide in the elderly (Beck, Kovacs, & Weissman, 1975; Brown, Beck, Steer, & Grisham, 2000a). While cognitive behavioural therapy (CBT) is efficacious for treating depression in older adults (Scogin, Welsh, Hanson, Stump, & Coates, 2005), significant proportions of these patients continue to report high levels of hopelessness (Szanto, Reynolds, Conwell, Begley, & Houck, 198) or suicidal ideation (Bruce, Ten Have, Reynolds, Katz, Schulberg, Mulsant, Brown, McAvay, Pearson, & Alexopoulos, 2004) post-treatment. Techniques that encourage older adults to reminisce about their past mastery experiences have been found to improve well being (Bohlmeijer, Smit, & Cuijpers, 2003), and therefore, may help reduce hopelessness and suicidal ideation beyond the effects of more traditional interventions offered through CBT protocols. However these techniques have received less research attention and little is known about their clinical efficacy for hopelessness and suicidal ideation. Even less is understood about ways of incorporating reminiscence based techniques into a CBT framework. This paper explores the efficacy and application of such techniques in a randomized control trial of CBT with suicidal older men.

Keywords: *older people, suicide intervention strategies, suicidal ideation, well-being, mastery experiences*

The coherence of moral thinking from a developmental perspective

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The implicit assumption of Piaget's and Kohlberg's cognitive developmental theory is the development of cognitive coherence (equilibrium between internal cognitive structure and external environmental world). via resolution of cognitive conflict. The purpose of the present research is to investigate whether the global coherence of moral thinking is increased by age. The author utilized four moral situations to evaluate the subjects' responses to two contradictory arguments concerning behavior of stealing, cheating, cheating in an exam, breaking a promise. The correlation of the two responses indicated the degree of coherence. Since the material should be developed differently for younger children and older subjects, the author designed two studies to study two age groups; Study 1 for elementary school children, Study 2 for older subjects. Study 1 showed that sixth graders' moral judgment is more coherent than third graders' except the "Breaking a Promise Story". Study 2 showed that college students' moral judgment is more coherent than sixth graders' degree of coherence except "Breaking a Promise Story" as well. Taking study 1 and study 2 into account, coherence of moral thinking is increased by age which supports the implication by Piaget and Kohlberg's theoretical hypothesis. Because Study 1 and Study 2's used the "direct-transparent test" method which may induce the awareness of the conflict of the two arguments and hence decrease the age differences in judgments, Study 3 used a "direct-subtle test" to test the effect of the obviousness of conflict. Study 3 showed that the "direct-subtle test" is more sensitive than the direct-transparent test from a developmental perspective. This indicates that people that have a higher ability to detect contradiction may be involved in the development of the coherence of moral thinking.

Keywords: *Piaget, Kohlberg, developmental psychology, cognitive coherence*

The comparison between the factor of paired personality trait terms by the reaction times and the questionnaire: Attempt by extroversion and emotional stability scales

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It was hypothesized that reaction times (RT) to personality trait terms would change with the personality traits. The selective reaction time was analyzed, and the personality factor was extracted that was the reaction times for paired personality trait terms (ICAP2008, Berlin). We aim to try that correspondence with the personality factor from reaction times and the questionnaire scale scores. There were individual differences of the autonomous nervous system in the study of neurosis tendency (Eysenck, 1967). We examined RT for 8 terms in each session. There were 4 extraversion-introversion paired terms and 4 nerves-toughness paired terms. The paired personality terms were shown to the participants' right and left on the computer display, and it was selected to respond to them pushing a right and left reaction key. The selected key and reaction time were recorded. Participants also answered paired terms questionnaire which used the reaction time measurement with a five stage rating. Those reaction times were converted into z-scores for each participant, the extroversion and toughness were subtracted in the plus, and introversion and nerves were in the minus. The factor analysis was done by using the z-score. The result of the questionnaire arranged the reversal item and did the factor analysis. Each factor analysis was independently done. The result of the factorial analysis showed that two factors had been extracted from both reaction time and the questionnaire. Both factor structures were almost corresponding, with the first factors showing the extroversion and both the second factors showing the emotional stability. The factor score of the factor by reaction time and the factor by the questionnaire were requested respectively. The correlation coefficient of the factor by reaction time and the factor by the questionnaire was requested from these factor scores. Both the correlation coefficient of the first factor was $r=0.876$, and the second factor was $r=0.719$. The absolute values of the correlation coefficient between the factors that do not correspond were from 0.040 to 0.173. This result clarified that the comparison of paired terms by selective reaction time showed the result similar to the measurement according

to the rating scale from our experiment. In addition, the reaction time shortened when the conviction level to personality trait term was high, and was shown to be longer in the opposite case. As a result, the personality measurement that used reaction time was better than the rating by the questionnaire.

Keywords: *reaction time, personality traits, extraversion, introversion, emotional stability*

The construct validity of the two factor model of psychopathy

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Psychopathy has been conceptualised as consisting of two separate but related constructs (Karpman, 1948). The first is primary psychopathy, consisting of untruthful, selfish and callous behaviours. Secondary psychopathy is proposed to consist of emotional disorder, primarily in the form of impulsivity. The aim of the current study was to determine the construct validity of the two factor model of psychopathy. Personality questionnaires including the Five Factor Model, The Diagnostic and Statistical Manual (DSM; APA, 1994) defined personality disorders as measured by the Hogan Development Survey (Hogan & Hogan, 2001), and the Levenson Self-Report Psychopathy scale (Levenson, Kiehl & Fitzpatrick, 1995) were administered to 241 first year psychology students. Principal Components Analysis revealed that the two components of psychopathy were loading onto separate components. Primary psychopathy loaded with low empathy and agreeableness, whereas secondary psychopathy shared loadings with neuroticism and borderline personality traits. It was concluded that the current results provide evidence for the construct validity of a two factor model of Psychopathy.

Keywords: *primary psychopathy, secondary psychopathy, construct validity, two factor model*

The coping styles of Japanese host families in cross-cultural contact with international students: Identifying a typology on the basis of the AUC-GS learning model

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This research explores the coping styles of Japanese host families in intercultural contact situations with international students. The previous literature regarding intercultural psychology of the Japanese focused on the effectiveness of mastery of western style communication skills. The present study identifies the typology of coping styles by Japanese hosts to determine their intercultural communication styles. Semi-structured interviews were conducted with 20 Japanese host families who have hosted international students in local communities. The collected narratives were analyzed qualitatively in terms of culture "Awareness, Understanding and Coping", using the framework of the AUC-GS learning model. The informants were examined with regard to whether they noticed the existence of cultural differences, understood the occurring mechanisms of cross-cultural problems, and successfully coped with those problems. The informants were divided into six categories. The type traditionally considered legitimate in theories of intercultural psychology was found to be the most common with its goal overcoming intercultural conflicts. This type was then divided into 3 sub-types according to the developmental conditions of their coping strategies, which suggested a developmental model for hosts' coping ability, progressively creating cross-cultural understanding. Besides this legitimate type, new categories of host type were found, one of which was paying attention to advantages and attractiveness of international exchange with positively oriented recognition while lacking the analytical perspectives on culture differences. Another new type found was the host conducting the de-categorization coping style with the denial of culture differences. The host families coping styles of Japanese host families in intercultural contact were not categorized into the type traditionally considered ideal and legitimate. The present study suggests that both types of intercultural communication styles that focus on culture differences and that defocus them are equally effective for Japanese hosts. The educational implications of self-generated intercultural communication skills by hosts and their possible applications are discussed.

Keywords: *coping styles, Japanese, cross-cultural contact, international students, AUC-GS Learning Model*

The correlation between character strengths and happiness of Bugis people

WINANTI, P. (University of Indonesia)

The aim of this research was to produce a description about happiness and character strengths of the Bugis people of Indonesia, including their signature strengths. Furthermore, this research aimed to find the correlation between character strengths and happiness of the Bugis people and seeking the strength of each character's contribution to happiness. The participants were 225 Bugis adults, ranging from 18 to 55 years of age. The researcher constructed an instrument for measuring happiness and modified a VIA-IS instrument for measuring character strengths. To determine participants happiness and character strengths, participants completed the questionnaire given by the researcher. The results indicate that the majority of participants have a high level of happiness and character strengths. The signature strengths of the Bugis people are gratitude, kindness, citizenship, fairness and integrity. This research also found significant correlation between character strengths and happiness of the Bugis people - character strengths gave 32.9% of the contribution to happiness. Among those, love, love of learning and curiosity gave significant contributions. It is concluded that there is an association between character strengths and happiness of the Bugis people.

Keywords: *character strengths, happiness, Bugis people, Indonesia*

The correlation between the ADL level of elderly care facility residents and their water intake

JOH, H. (Kobe University)

In this research, our first purpose is to examine the correlation between activities of daily living (ADL) level and water intake by investigating the living condition of the residents who live in

elderly care facilities. The secondary purpose is to clarify the influence of their water intake on their subjective health (how lively they are) and the objective health viewed from their caretakers to propose better living conditions with improved ADL level. We had requested a survey concerning the living conditions of residents in five special nursing homes and one general nursing home for the elderly (six nursing homes in total) in Kobe City. The respondents to the survey were the 439 residents in all the facilities. Out of the 439, we got answers from 404 (89 males and 315 females) residents. We discovered that a lower ADL level tends to be the result of a residents' physical well-being, such as their walking ability and presence of illness, based on our observation of their ADL level, as well as subjective and objective health views in relation to their water intake. Especially, we found a correlation between water intake and excretion ability, recognition level, independence level and subjective health view on one's personal health, and it was made clear that the amount of water intake in the day is one important cause in determining an individual's ADL level. In this study, the results showed that it is necessary to grasp and reexamine living conditions which may be associated with a decrease in ADL level; especially, it is important to control residents' water intake during periods of fracture and illness. As being bedridden results in a decline in the person's psychosomatic functions, and reduced water intake causes a decrease in their ADL level, water intake and its management may be most important for improvements in living, better ADL and quality of life.

Keywords: *activities of daily life, water intake, elderly care, quality of life, Japan*

The development of the concept of death among Japanese young children

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The primary focus of this study was to examine the acquisition process of the death concept with regard to humans and animals among Japanese young children. In order to examine the degree to which children understand the concept of death, researchers have specified

four death characteristics. The death characteristics that have been used for research studies include "finality", "irreversibility", "universality", and "causality". Although studies have found few consistent conclusions in regards to what age children acquired these death concepts, many have demonstrated that children acquire the concept of death by the age of 10 in Western countries. This study evaluated the acquisition of these concepts in Japanese children. In this study of Japanese children, 117 subjects aged 3-6 years old were interviewed individually about the four death concepts with regard to humans and animals. The scale items and score calculations were developed using the DDCQ (Development of Death Concept Questionnaire, Smilansky, 1987) as a reference. First, the study determined which type of death (human or animal) was easier to conceptualize. The results suggest that the conceptualization of death in animals is easier than in humans. The finality, irreversibility and universality death characteristics were easier to conceptualize in animals, while causality was conceptualized similarly in both humans and animals. The study then examined the effect of age on the conceptualization of death, which found a significant difference in both humans and animals. Specifically, age differences precipitated a significant effect on the conceptualization of irreversibility, universality and causality in human death as well as universality and finality in animal death. The results of the study suggest that children acquire the concept of death in animals more easily than in humans. It is assumed that children are more frequently exposed to the concept of animal death (e.g. pets) than human death. While it was found that the conceptualization of death was nearly completed by the age of 4 or 5, there is still the assumption that the irreversibility characteristic of death can be conceptualized by the age of 3 or 4.

Keywords: *death, children, development of Death Concept Questionnaire*

The development of the face audience communication fear scale for Chinese college students

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The objectives of this study was to develop the Face Audience Communication Fear Scale for Chinese college Students according to the actual background of the Chinese college students, and to examine the reliability and validity of the Face-Audience Communication Fear Scale (FACFS). The first sample consisted of 349 students from education and non-education universities for items analysis. One part of the second sample, with 619 college students, was for confirmatory factor analysis (CFA); and the other part for cross-validity analysis. The third sample was for test-retest reliability. Exploratory and confirmatory factor analysis were used to develop and evaluate the structure of the scale. Results showed that the FACFS has four factors: lecture fear, social communication fear, group communication fear, and the ability of coping with fear. The CFA showed the fitness of the high order factor of the scale: $CMIN/df = 1.692$, $GFI = 0.916$, $IFI = 0.940$, $NNFI = 0.930$, $CFI = 0.939$, and $RMSEA = 0.047$. Cronbach's Alpha coefficient was 0.903, and the test-retest reliability was 0.88. To conclude, factor analytic studies showed that the structure of the FACFS was reasonable. The internal consistency, test-retest reliability, content validity, construct validity of the FACFS entirely were in accord to psychometric demands.

Keywords: *Face Audience Communication Fear Scale, Chinese students, reliability, validity, scale development*

The difference between Japanese men's and women's evaluations of the "food selection criteria"

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Asakawa and Okano (2009) studied food selection criteria and derived the following five dimensions: (1) mood, (2) safety, health, and nutrition, (3) convenience, (4) weight control, (5) price. In this research, the reliability of the five dimensions of "food selection criteria" is investigated first. Next, the difference between males' and females' evaluation of the five dimensions is examined. The 36-item questionnaire survey about food selection criteria was completed by 116 female students and 115 male students. Based on Asakawa and

Okano (2009), we made a five-factor model and analyzed it with Structural Equation Modeling (SEM). In addition, Multiple Group Analysis was carried out to compare the estimations of the five dimensions between males and females. Analysis of the five factor model produced the following scores of the fit index: $GFI = 0.939$, $AGFI = 0.915$, $CFI = 0.948$, $RMSEA = 0.056$, $AIC = 317.022$. Having demonstrated its reliability, we decided to adopt this model. To conclude, through Multiple Group Analysis, the differences in estimation of the five dimensions between males and females were confirmed, revealing a difference in only the "weight control" dimension. The female students considered the "weight control" dimension more important than did male students.

Keywords: *food selection criteria, reliability, gender, structural equation modeling, multiple group analysis*

The difference of compromise process according to suggested stimulus(occupations) in the career decision making situation of Korean youths

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The object of this study is to analyze the compromise factor preference in terms of a change in the combinations of the factors. Gottfredson and her colleagues have suggested the 'sex type' of occupation is the most important factor (most hard to compromise) compared to 'prestige' and 'interest' in career decision process. However, Kim(2009) produced different results from the Korean subjects, in which interest is the most important factor compared to prestige and sex-type. In this study, a hypothesis was examined: The job options given to the subjects will make the differences. If the job options contain an occupation with extremely male (or female) type, this will make different result compared to the case with no extreme sex type. For this purpose, this study used a web-based career decision program developed by Kim and Kim (in print). Three different kinds of job options were given to the subjects: Situation 1, occupations considered

with strong sex types are included in the decision making options (E.g., nurse as extremely female; aircraft pilot as extremely male). In Situation 2, occupations considered with strong sex type characteristics are not included. Situation 3 provides randomly selected occupations regardless of their sex types. One hundred and sixty-two subjects participated in the study, and they are middle and high school students in South Korea. The major finding is as follow: In Situation 1, the female students consider sex type as most important, however, same results did not appear in the Situation 2 and 3. In contrast, the male students consider interest most important in the Situation 1, 2, and 3. Compromising is one of the main aspects in the career decision process and the combination of job options is an important factor related to the compromising preference. There seems a gender difference in terms of compromising factors in career decision-making. However, the study did not tell where the gender difference came from.

Keywords: *career, decision making, gender differences, occupation*

The difference of decision making pattern in Iowa Gambling Task between Japanese pathological gamblers and Japanese university students

KIDO, M. (Kwansei Gakuin University), SHIMAZAKI, T. (Kwansei Gakuin University)

Pathological gambling (PG) is persistent and recurrent maladaptive gambling behavior that disrupts personal, family, or vocational pursuits. Decision making deficits also play an important role in the definition of PG. However, there are no empirical studies about decision making processes of pathological gamblers in Japan. Therefore this study compares decision making processes of pathological gamblers with normal controls using the Iowa Gambling Task (IGT). In this study we administered IGT to PG group (n = 8) and normal control group (n = 30). PG group was consisted of Gamblers Anonymous (GA) members, which is a mutual aid organization of PG, and the normal control group consisted of Japanese university students. In the IGT, participants had to choose between 4 decks of cards and had to make 100 card choices. The 4

decks consisted of 2 disadvantageous decks (high-risk, high-return decks) and 2 advantageous decks (low-risk, low-return decks). We used a computerized version of IGT as described in Bechara, Tranel, & Damasio (2000). We subdivided the 100 card choices into 5 blocks of 20 cards each. And we counted the number of choices from disadvantageous decks and advantageous decks for each block. We then calculated the net score to derive the total number of choices of advantageous decks from disadvantageous decks for each blocks. As the task progressed, the normal control group gradually shifted their preference towards advantageous decks and away from the disadvantageous decks, as reflected by the shift in the net scores towards positive. Similarly, the PG group shifted their preference towards advantageous decks, but they chose more cards from the disadvantageous desks by and large. In addition some of the members of PG group failed to demonstrate this shift in behavior. In this research, the possibility was proved that IGT can recreate the distinctive feature of decision making patterns of Japanese pathological gamblers. Therefore, future research will investigate the factor of changing decision making patterns of pathological gamblers to develop the method of intervention for PG patients.

Keywords: *gambling, decision making, interventions, Japan*

The differential efficacy of virtual reality exposure in the treatment of chronic agoraphobia

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This paper presents data about the differential findings of two intervention programs in the treatment of patients with chronic agoraphobia disorder: traditional psychological therapy and the use of virtual reality. The traditional therapy consists of the use of expositive techniques with cognitive restructuring (cognitive behavior

therapy; CBT). The treatment with virtual reality (VRT) consists of exposing patients to phobic scenarios constructed in a virtual reality, as part of expositive procedures. Patients were also treated with psychoactive drugs (venlafaxine or paroxetine). Patients were treated in the psychiatry service of Hospital Universitario de Canarias. Sixty patients received 11 individual psychotherapy sessions (30 CBT group, and 30 VRT group). Sessions 1, 2, and 3 were similar for both the CBT and VRT group. In the VRT group, sessions 4 to 11 consisted of an exposing procedure to phobic stimuli, presented by virtual reality. The CBT group was trained in the use of exposition to different phobic stimuli. Both groups were treated with cognitive restructuring to deal with pathological thoughts (non-adaptive coping strategies), and were motivated to use in vivo self-exposure. Patients were assessed three times: pre-treatment, post-treatment and a six month follow-up. Results were analysed according to different measures of level of anxiety and the use of coping strategies. Results showed that both treatment programs were efficient. Also, data suggest a better clinical efficiency of VRT with chronic agoraphobic patients, not related to the type of drugs used. These findings are discussed in relation to the development of new technological approaches to mental health.

Keywords: *agoraphobia, virtual reality, cognitive behavior therapy, differential efficacy, cognitive restructuring*

The dimensions of newcomers' adjustment and its relation with other variables in the background of China motherland

LIUZHAN, J. (Huazhong Norm University)

The aim of this study was to explore the concept of newcomers and research the relationships between antecedent variables and their outcomes. The methodology employed on 345 newcomers included a literature review, questionnaire survey, exploratory factor analysis, confirmatory factor analysis and structural equation modeling. The fit indices of newcomer adjustment for the theoretical model was $\chi^2 = 143.37$, $df = 62$, RESEA = .062, CFI = .918, GFI = .937, NFI = .866, PNFI = .689, NNFI =

.897 and AIC = 201.37. There were three structures identified for newcomer adjustment, which were role clarity, self-efficacy, and social acceptance. In conclusion, the collective versus individual tactics, and serial versus disjunctive tactics, have significant relationships with the two dimensions of newcomer adjustment of role clarity and self-efficacy. Newcomer adjustment has positive relationships with work satisfaction and job performance, and casts a negative effect on the individuals' quit intentions.

Keywords: *newcomers, adjustment, structural equation modeling, China*

The ecology of perception of safety in urban environment: The case of the city of Rome

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The Cumulative Risk Model (Evans, 2003; Evans, 2004; Evans & Marcynyszyn, 2004) is a model traditionally applied to developmental issues and is proposed here for the first time in relation to the analysis of safety and fear of crime in the city of Rome. The aim of the study is to clarify some of the dynamics existing between perception of safety, fear of crime and social/physical factors. 550 residents of three neighborhoods of Rome (safe, unsafe, and neither safe or unsafe) participated to the study. The instrument comprised a self-administered questionnaire with a first section containing social, environmental, and safety questions and the second containing well being questions and sociodemographic information. Each risk factor (taken out from the responses of the residents) was defined dichotomously (0/1) on the basis of statistical or theoretical criteria. Cumulative risk was defined as the simple, unweighted sum of fourteen risk factors (Evans 2003). Results confirmed the cumulative negative effects of multiple risk factors on perception of insecurity/fear of crime and on well being/satisfaction with life. In particular, it is shown that as the number of risk factors rise, perception of insecurity and fear of crime increase, while well being and satisfaction with life decrease. The present data showed that, consistently with the literature of developmental psychology (Greenberg, Lengua, Coie &

Pinderhughes, 1999; Evans & Marcynyszyn, 2004), exposure to a small number of risk factors does not lead to strong negative consequences for the person, but as the number of risk factors rises, the negative consequences increase. Traditional approaches to safety may underestimate the negative effects of a large number of risk factors on safety, since they are usually focused on a small number of factors. On the other hand, analyzing a large number of risk factors acting together may help to get closer to the daily experience of a resident in terms of perception of insecurity/fear of crime, and to capture the "ecology" of safety in the city.

Keywords: *cumulative risk model, crime, Rome, safety, well-being*

The effect of "pupils' safety map": How the map based on Photo Projective Method increases the safety awareness

OKAMOTO, T. (Kwansei Gakuin University)

This study aimed to examine the effects of the "Safety Map of the Pupils' Commute" for the increase of parents' safety awareness. The map was made with the unique method; Photo Projective Method (PPM) which was developed by Noda (1988). PPM is a new technique based on a projective method which captures subjects' perceived environments by photographs. Thus, the method helps us understand the individual's internal mental world. We have already revealed the differences of children's safety awareness from the adults' one with this method (e.g. Okamoto, Hayashi, & Fujihara, 2008, 2009). However, we have not measured the effect of the map on safety awareness. Thus in this research, we investigated to what extent their parents increase their awareness of the safety by using the map based on PPM. Firstly, we asked 27 children (6-12 years old) and 30 mothers to take any photos of hazard points or anxious areas for the children during their school commute. Secondly, we developed the Safety Map based on this evidence and our findings (Okamoto, et.al., 2008, 2009), and distributed it to 285 pupils and their parents. Thereafter, we asked them to discuss the safety with their family. The map includes road information, photos, types of hazards, and comments for the

safety. In addition, we also distributed questionnaires of safety awareness twice - before and after distributing the map to their parents. The result shows that the usability, needs and the veracity of the map is high, and parents' safety awareness of the children's safety is increased by joining in the map making process. Using the PPM, creating and distributing the map of safety for the children shows that the importance of the map is high. In addition, the result also shows the applicability of PPM to the situations which are hard for the subjects to verbalize.

Keywords: *safety, awareness, commute,*

The effect of "green exercise" on state stress and anxiety

MACKAY, G. (University of Canberra)

This study explored the effects of green exercise on state stress and state anxiety, and the role played by intensity, duration, and degree of greenness. A quasi-experimental design was implemented, with 101 participants from a variety of pre-existing outdoor exercise groups from the Australian Capital Territory completing pre- and post-exercise questionnaires. Results indicated a significant reduction in participants' levels of state stress ($d = .38$) and state anxiety ($d = .51$) following green exercise. Reductions in state stress and anxiety were evident in the majority of green exercise groups. The intensity and duration of green exercise did not significantly affect changes in state stress or anxiety. The degree of perceived greenness of the exercise was associated with greater reductions in state anxiety. Green exercise has important implications for economic and mental health benefits, along with health policy and urban planning.

Keywords: *green exercise, state stress, state anxiety, health policy, mental health*

The effect of aquariums on the interest of older adults

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It is becoming popular for aquariums to be placed in the rooms of some hospitals and nursing homes to relax or cheer the patients. However, the effects of aquariums have not been clarified to date. In this study, we discussed whether the visual aquarium (VA) and real aquarium (RA) attract the interest of older adults. We placed VA and RA on the lounge of a retirement home and an adult day care center in Gifu city. NEC Uo-Hakkei with a 25 inch monitor was used as the VA. The RA was almost the same size as the VA. Each aquarium consisted of the same kinds of tropical fishes and plants. For the first 4 weeks the VA was placed in the home/center, and for the next 8 weeks, the RA was placed in the home/center. In the retirement home, behaviors of the residents in the morning (6:00~8:00) and in the evening (17:00~19:00) was recorded through security cameras. In the adult day care center the behaviors of the visitors were recorded during a lunch break (12:30~13:30) by 4 observers. In the retirement home, significantly more residents approached the VA and RA or gazed at them in the mornings of the first week. However, in the VA condition, the number of residents approaching the aquarium or gazing at them decreased rapidly in the evenings of the first week. In the RA condition, on the other hand, the number of residents was maintained for 8 weeks, except for some days. In the adult day care center, significantly more visitors approached the RA. However, in the VA condition, the number of visitors was not increased as in the RA condition. These results showed that the RA and the VA can attract the interest of older adults. Although they lost interest as time passed, the RA seems to have the effect of attracting interest continuously relative to the VA.

Keywords: *aquariums, older people, nursing home, retirement homes, Japan*

The effect of cognitive enhancement training programmes in older adults: An ERP study

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Normal ageing is often associated with progressive losses in a number of abilities, primarily executive control processes and cognitive functions involving memory. The current study examined the effectiveness of the Active Cognitive Enhancement (ACE) programme on source memory. ERP measurements were used to examine differences in brain activity in older adults, during a source memory task, before and after completion of the cognitive training programme. The ACE programme was developed for individuals aged 55 to 80 years of age, and focuses on enhancing a range of cognitive abilities including memory, attention and concentration, speed of processing, and problem solving. Fifty-eight participants were assigned to either the ACE training or control group. ACE participants were tested on the source memory task while EEG recordings were taken prior to and immediately following completion of the 10 week cognitive training programme. Controls were tested twice, 10 weeks apart. The source memory task involved a study phase in which participants were instructed to learn 20 visually presented words, as well as the colour of the font (red or blue). The test phase involved 40 words (20 old and 20 new), and participants indicated whether the word displayed had been presented in the study phase, and if so, what colour it had originally been presented in. After the completion of the ACE programme participants had significantly more correct responses on the source memory task. Analysis of the EEG data indicated pre-post differences in brain activity in the right frontal area in both the early (400-800ms post stimuli) and late (600-1200ms post stimuli) time windows, as well as along the midline in the early time window. In these areas, there was a significant increase in positivity of the mean amplitudes post-programme, which could be seen as being representative of increased recruitment in these brain areas. These findings indicate that the ACE program produced significant improvements in source memory capabilities in a group of older adults. The EEG results suggest that the improved source memory may be linked to increased recruitment of frontal brain areas in the right hemisphere.

Keywords: *cognitive ability, older people, memory, ERPs, training*

The effect of computer use on social interaction and academic performance of Pakistani adolescents

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The present study was conducted to examine the effect of computer use on social interaction and academic performance of adolescents. It was hypothesized that: there is relationship between computer use and social interaction and there is relationship between computer use and academic performance. A sample of 200 adolescents was selected from the private sector schools in Lahore, Pakistan. A demographic information questionnaire and a questionnaire for social interaction and technology use were used for assessment. Data was analyzed using descriptive statistic, correlation and t-test analyses. The results indicated that there is significant negative relationship between computer use and social interaction whereas there is no relationship between computer use and academic performance. Excessive computer though does not affect academic performance of adolescents but it adversely affects social relationships of adolescents.

Keywords: *adolescent social relationships, computer use, academic performance, social interaction, technology use*

The effect of continuous warning signals on a visual task

TAKECHI, N. (Osaka University), USUI, S. (Osaka University)

This study was conducted to investigate the effect of continuous auditory warning signals on a visual task. In two experiments, participants performed tracking tasks with or without an audio stimulus (AS). We manipulated three factors, "validity," "length of AS (length)," and "instruction". In the validity factor, responses could be "valid" (the tracking target (target) and AS were on the same side), "invalid" (the target and AS were on opposite sides), and "no-audio"

(without AS). Validity refers to the relationship between the location of the AS presented and that of the target presented or the target's direction of movement. Lengths were set to 4, 7, or 10 seconds to investigate the effect of continuously presenting the AS. Instruction was made to investigate whether participants respond to the AS, and it was constructed by "irrelevant" and "cue". In the irrelevant condition, targets and AS were presented from the same side 50% of the time. In the cue condition, the target and AS were likely to be presented from the same side. We measured the reaction time and keeping time (amount of time in which participants continue tracking the target). An analysis of variance (ANOVA) was performed on the three factors described above. In Experiment 1, participants responded more rapidly in the valid condition than in the invalid condition and reacted the most slowly in the no-audio condition. By contrast, in Experiment 2, participants responded more rapidly in the irrelevant condition than in the cue condition. In both conditions, the keeping time under the valid condition was longer than that under the invalid condition when an AS was the cue. However, there was no difference under the irrelevant condition. The direction in which the target was moving had no effect. These results suggest that the relationship between the continuous AS and the visual task affect the visual task performance, when the AS is a cue of the visual task. At the same time, the direction of the target's movement has no effect. The locations of audio and visual stimuli presented must therefore be considered when designing working spaces where people are presented audio signals.

Keywords: *auditory warning signals, visual task, audio stimulus, visual task, working spaces*

The effect of Dohsa-hou (a Japanese body-movement psychotherapy) for pain management on hemodialysis patient's life style

HARAMAKI, Y. (This study aimed to clarify the effect of Dohsa-hou (Japanese original body-movement psychotherapy) on the hemodialysis patient's life style involving pain management. The case study was a 63 year old female who had been receiving dialysis treatment for 33 years, and had

chronic pain throughout her whole body for a long time. The researcher applied Dohsa-hou 3 times a month. Three categories were measured to verify the effect of Dohsa-hou: 1) an understanding/relieving of her chronic pain (pain care); 2) the functional improvement of her life; and 3) the motivation improvement of her self-care. The effects were: 1) an understanding/relieving of chronic pain, her pains were an excessive pain reaction by experience, and it became clear that relieving by the relaxation through applying the Dohsa-hou; 2) through Dohsa-hou, her life styles, which were rigid and strained herself to housekeeping when there was chronic pain were recognized, and it became clear that her mental styles were changed to not straining oneself, loosening is mastered, and it comes to build the life style of a rest by Dohsa-hou; and 3) the effect of Dohsa-hou which raised her motivation to self care was indicated by tackling chronic pain using Dohsa-hou tasks at her house, and taking medicine for chronic pain for the purpose of preventing the chronic pain. Dohsa-hou is an original Japanese psychotherapy which approaches the mental state through improvement of body movement. This case study indicated that the effect of Dohsa-hou was relieving for chronic pain, her life styles, and increasing self care ability (including pain management).

Keywords: *pain management, Dohsa-hou, Japanese original body-movement psychotherapy, chronic pain, life style*

The effect of emotional labor on stress and job satisfaction in call-centre agents: Moderating role of self-efficacy

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The present study investigates the effect of emotional labor on stress and job satisfaction in call centre agents. Furthermore, the role of self-efficacy as a moderator has also been examined. The sample included 269 call centre agents from seven call centers, located in New Delhi and in the vicinity. Standardized measures of emotional labor, perceived stress, job satisfaction and self-efficacy were administered. Cronbach's Alpha of all the measures varied from moderate to high. Direct relationships indicated that (a) only one dimension of emotional labor (i.e. surface acting) was positively related to perceived stress

($r = .13, p < .05$), (b) surface acting dimension of emotional labor was negatively correlated with extrinsic-intrinsic dimension of job satisfaction ($r = -.13, p < .05$), whereas frequency with deep acting dimension of emotional labor was positively correlated with one dimension of job satisfaction, i.e. social-intrinsic ($r = .15, p < .01$). Further, stepwise regression analysis revealed that (a) among the dimensions of emotional labor, two dimensions (surface acting and frequency with deep acting) turned out as significant predictors ($\beta = .17, p < .01$; $\beta = -.13, p < .05$) of perceived stress, whereas in the case of job satisfaction significant predictors were frequency with deep acting ($\beta = .36, p < .00$), variety with deep acting ($\beta = -.27, p < .00$), and surface acting ($\beta = -.18, p < .00$). In order to analyze the moderating effect of self-efficacy, sample was divided into high and low self-efficacy groups using median score. Results revealed that one dimension of emotional labor (surface acting) predicted perceived stress ($\beta = .31, p < .00$) and two dimensions of job satisfaction (social-intrinsic and extrinsic-intrinsic) ($\beta = -.22, p < .01$; $\beta = -.28, p < .00$) for the high self-efficacy group but not for the low self-efficacy group. Another dimension of emotional labor (frequency with deep acting) also predicted perceived stress ($\beta = -.21, p < .05$) but only for the high-self efficacy group. These results indicate that employees with high self-efficacy are likely to have more negative effects of stress, especially when they are engaged in surface acting.

Keywords: *emotional labour, stress, job satisfaction, call centre, self-efficacy*

The effect of grateful messages and descriptive norms in deterring deviant behavior: An experimental study on deterring deviance from trash-disposal rules

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Expressing gratitude reinforces prosocial behavior (McCullough, 2001). This study examines whether statements of gratitude on posters can be effective in deterring deviant behavior, especially deviance from trash-disposal rules in Japan. Messages like "Thank

you for following the disposal rules” expresses gratitude and should, therefore, induce reciprocity (McAdams & Bauer, 2004). By showing appreciation for cooperation beforehand, one expects people to oblige by refraining from careless disposal. Others’ behavior (descriptive norm) may, however, cause grateful messages to have a boomerang effect. Using the focus theory of normative conduct (Cialdini et al., 1991), we predicted that grateful messages would be more effective than neutral messages when the descriptive norm is consistent with the message (injunctive norm) owing to reciprocity. It would fail, however, when the descriptive norm is inconsistent with the injunctive norm, because the message would be unrealistic, thereby causing dissonance. Further, we predicted that people are inclined toward obeying rules when the two norms are consistent, regardless of the message type. The experiment was a 2 (grateful versus neutral message) × 2 (consistent versus inconsistent norm) between-subjects design. Participants (226 Japanese undergraduates) were given a small tea carton and a plastic straw each and instructed to dispose them in trash cans after drinking. The descriptive norm was manipulated by discarding some trash by following the rule (norm consistent) and some by not following the rule (norm inconsistent). Either message was printed around the cans. We scored the subjects’ mode of disposal along 3 criteria, such as disposing the carton and the straw as combustible and incombustible garbage respectively. The ANOVA results indicated that participants followed the disposal rule when the two norms were consistent rather than inconsistent. However, there was no significant interaction between message type and norm. Contrary to our assumption, participants were not affected by message type. Observers reported that participants seemed to dispose of trash without reading the message. Therefore, results might indicate a strong influence of other people and not the messages, a finding congruent with previous research (e.g., Cialdini, 2003). Future studies should use more visually perceptible messages in order to exert the required influence.

Keywords: *gratitude, normative conduct, trash-disposal, Japan*

The effect of leader's emotional intelligence on subordinate's organizational commitment and job satisfaction: Focused on mediating effect of leader's behavior

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The purpose of this study was to investigate the relationship between the leader's Emotional Intelligence (EI) and the leader's behavior, and the mediating effect of the leader's behavior between the leader's EI and the subordinates organizational commitment and job satisfaction. This study also examined the moderating effect of an organization's career development and education support on the relationship between the leader's behavior and the subordinate's attitudes. Data were collected from 251 workers in various companies in Korea. The results of this study showed that the leader's EI positively related to the leader's coaching behavior, consideration behavior and visionary behavior. Coaching behavior, consideration behavior, and visionary behavior were positively related to the subordinate's organizational commitment and job satisfaction. The leader's coaching behavior, consideration behavior, and visionary behavior mediated the relationship between the leader's EI and subordinate's organizational commitment and job satisfaction. Finally, an organization's career development and education support moderated the relationship between the leader's coaching behavior, consideration behavior, visionary behavior and subordinate's attitudes. The leader's coaching, consideration, and visionary behaviors mediate the relationship between the leader's emotional intelligence and the subordinate's organizational commitment and job satisfaction.

Keywords: *emotional intelligence, leadership behaviour, job satisfaction, organisational commitment*

The effect of mothers' emotion traits on that of high school and university students in Japan: A study within the framework of the cognitive appraisal theory

YAMAUCHI, H. (Nagoya University)

This study aimed to investigate the effects of mothers' emotion traits - defined as "the tendency of the individual to experience a particular emotion with frequency in his or her day-to-day life" - on students' emotion traits. A further aim was to examine the mechanism that underlies this effect, and the cognitive appraisal theory (e.g., Lazarus, 1991) was applied. The theory assumes that emotions are elicited by the appraisal of the relationship between an event and the self (i.e., event -> appraisal -> emotion). The Subjects comprised 97 high school students and 110 university students, and their mothers, numbering 207. The students and their mothers were instructed to complete the same questionnaire, which comprised a scale that could measure their emotion traits and appraisal styles. The scale contained 14 short stories describing interpersonal situations. Subjects were asked to rate (1) anger and sadness and (2) typical appraisals, that they would feel in a given situation on a 3-point scale. The main results were that (a) the anger/sadness appraisals were strongly associated with the anger/sadness traits in both students and mothers; (b) no direct relationship between students' and mothers' anger/sadness traits was found; and (c) the students' anger/sadness appraisals were regressed on their mothers' anger/sadness appraisals. The fact that an association was found between the appraisal styles and emotion traits is congruent with the cognitive appraisal theory. However, intergenerational transmission of emotion traits, a phenomenon suggested by earlier research, was not found. On the contrary, the appraisal style was found to transmit from mothers to students. The result implies that mothers' appraisal styles affect adolescents' emotion traits by using the latter's appraisal styles as an intermediary. The results could be interpreted two ways. First, the transmission of emotion traits' is limited to infants since the subjects of most of the advanced research in this field involved infants. Second, developmental changes affect the result. In infancy, emotions may be elicited in processes that do not involve cognitive appraisal. With development, emotions that need cognitive appraisal may increase, and thus, the nature of the effect that mothers have on adolescents may also change.

Keywords: *emotion traits, mothers, students, cognitive appraisal theory, appraisal style*

The effect of optokinetic stimulation on pseudoneglect in a virtual environment

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Hemispatial neglect is the impaired or lost ability to detect or react to sensory stimuli presented in the hemispace contralateral to the lesioned cerebral hemisphere. Healthy individuals also show a small leftward bias known as 'pseudoneglect'. Although visual scanning training (VST) has been successful in treating neglect, it has some drawbacks. Optokinetic stimulation (OKS) is a visual display of numerous stimuli all moving coherently to the neglected side, and is a technique that makes up for the weaknesses of VST. In this study, we applied OKS to a virtual environment which allows control of the participant's visual field and also increases immersiveness of the stimuli. Another advantage is that it is easier to generalize the treatment to daily life because the treatment stimuli uses a background of typical city streets, thus participants can experience a realistic treatment environment. The purpose of this study is to test the effect of this new OKS program for hemispatial neglect by examining its effectiveness on pseudoneglect. Participants will be neurologically healthy, right-handed people. Prior to the treatment, a baseline level will be assessed using a line-bisection task and an erase task on paper and on a screen. Participants will receive leftward- and rightward-OKS treatment in a virtual environment at slow, medium, and fast speeds, at random. After each rightward and leftward session, participants will receive a line-bisection test and an erase test. Treatment will be conducted using the GDS Side View Neglect program, which we created for OKS treatment in a virtual environment, presented using a see-through head mounted display with a head motion-tracking device. As this is a study in progress, we predict that participants will show a correction of their leftward bias after the fast-speed rightward-OKS compared to the other speeds, while leftward-OKS will induce an increased leftward bias. Also, completion speeds of the erase task will be reduced after rightward-OKS, but not after leftward-OKS. This study will examine the influence of OKS in a virtual environment, and the expected results may

provide a valuable treatment method for hemispatial neglect patients.

Keywords: *hemispatial neglect, visual scanning training (VST), optokinetic stimulation (OKS), virtual environment*

The effect of positive and negative leading post-event information on eyewitness memory within participants

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Studies often examine the effect of post-event information on eyewitness memory by providing participants with only misleading post-event information. However, the effect of post-event information has not been examined by providing participants with positive leading (PL) post-event information. PL post-event information might influence eyewitness memory in a similar positive way as negative leading (NL) post-event information negatively affects it. This study investigated the effect of post-event information within participants by providing them with correct (PL) and incorrect (NL) post-event information. Twenty-four undergraduates were presented a three-minute movie followed by one of three versions of a narrative about the events in the movie. Each narrative contained four correct (e.g., 'An old and a young man were fishing in a river. '), four incorrect (e.g., 'An old and a young man were fishing in a lake. ') and four neutral (e.g., 'An old and a young man were fishing. ') statements that were counterbalanced across the three versions of the narrative. Afterwards the participants were asked to answer a cued recall test concerning the events. Questions about events that had received PL post-event information were not answered more frequently correctly (81%) than questions about events that had received neutral post-event information (73%), which suggested that participants did not use the correct information that was given in the narrative. Both kinds of questions were, however, answered more often correctly than questions about events that had received NL post-event information (55%), indicating that participants frequently failed to ignore the misleading post-event information. Participants did not make use of the PL post-event information, but they failed to ignore the

NL post-event information. The difference between the performance on the questions that had received PL or neutral post-event information might become significant with more participants, but the effect of NL post-event information would probably remain larger than the effect of PL post-event information. There were correct, incorrect and neutral statements concerning each event in the study, so the results were not affected by the saliency of the events. The accuracy of the post-event information might, however, have influenced the results. Because the correct statement and the witnessed event are congruent, participants are not required to make any changes to their eyewitness account, whereas they have to decide whether to make adjustments when their account and the incorrect statement are incongruent.

Keywords: *post-event information, eyewitness accounts, negative leading post-event information, positive leading post-event information, witness*

The effect of receiving help on self-esteem and face in different relational contexts

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Previous research confirmed that receiving help might be perceived as self-threatening (Ames et al., 2004; Fisher et al., 1982; Nadler & Fisher, 1986). According to the self-evaluation-maintenance model, receiving help from a significant other on an ego-relevant task can be threatening to one's self-esteem. In Chinese Confucian culture, there are strong positive duties among inside-family members (Wei, 2001). It is inferred that role obligation moderates the relationship between receiving help and self-esteem threat. The research design was a 2x2 between-subject factorial design. A self-developed scenario questionnaire was used to measure the dependent variables. The independent variables were closeness of relationship (inside- vs. outside- family relationships) and power distance of relationship (vertical vs. horizontal relationships) between the helper and the recipient. The dependent variables were self-esteem, face perception, and

the degree of indebtedness the recipient felt after receiving help. One hundred and sixty two college students participated in the study (105 females and 57 males) and the average age was 19.75 years. Receiving help from outside-family members made individuals feel lower self-esteem, face perception, and indebtedness than when helped by inside-family members. Receiving help from high-status persons in vertical relationships resulted in lower self-esteem, face perception, and indebtedness than when helped by equal-status persons in horizontal relationships. Self-esteem threat for receiving help was reduced in inside-family or vertical relationships because of role obligation.

Keywords: *help, self-esteem, role obligation, face perception, indebtedness*

The effect of relationship with parents on other-oriented achievement motivation

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In self-determination theory, autonomy has an important role on achievement motivation. But to fulfill expectations of significant others was reported frequently by Japanese people as a motive for achievement. Ito (2003) distinguished other-oriented achievement motivation as this motive from self-oriented achievement motivation. The purpose of this study is to examine the effect of the relationship with parents on acquiring other-oriented achievement motivation. 84 undergraduate students were subjected to both the questionnaire survey and the semi-structural interview. This questionnaire was about the attitude to self-and other-oriented achievement motivation. In the interview, they were asked what expectation their parents had to them and whether they had experiences of conflict with their parents, when they were in junior and senior high school. The expectations of parents were classified by five categories (respect for will of children, average grade, specific expectation, high grade, and low or no expectation). In the result of factor analysis of the questionnaire, six sub-scales (e.g. positive attitude to other-oriented achievement motivation) were formed. An ANOVA on these sub-scales showed that undergraduate students whose parents had

specific expectations or high expectations were likely to have other-oriented achievement motivation than undergraduate students whose parents had little or no expectation. And it was shown that undergraduate students whose parents had had specific expectations had negative attitudes but undergraduate students whose parents had had high expectations had positive attitudes to self-oriented achievement motivation. It seems that the content of expectations of parents has an important role on the nature of children's achievement motivation. Acquiring other-oriented motivation is encouraged by an appropriate relationship with parents.

Keywords: *self-determination theory, achievement, parents, expectations, attitudes*

The effect of rice deprivation on rice craving and rice-eating frequency in Japanese people

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Food cravings are defined as an intense desire to consume a particular food or food type that is difficult to resist. Various studies found that in Western countries chocolate is a food particularly craved. In contrast, Japanese people most frequently experience craving for rice. Rice craving was not related with voluntary restriction of rice but with involuntary restriction of rice. The objectives of this study were to experimentally investigate whether rice deprivation produces rice craving, how the periods of rice deprivation influence rice craving, and whether rice deprivation increases rice-eating frequency after deprivation periods. Participants were 51 undergraduate students. They were divided into one-day deprivation condition, three-day deprivation condition, or no deprivation condition. Participants in the deprivation conditions were instructed not to eat plain rice (including sushi, onigiri, and donburi) for one or three days. They were allowed to eat rice prepared as part of a meal, such as fried rice and pilaf. For one week, they maintained a food diary and assessed nightly how often they experienced a craving for rice during that day. Participants in the one-day

deprivation condition and three-day deprivation condition showed an increase in rice craving during deprivation periods. There was no significant difference in rice craving between the first day in the one-day deprivation condition and the third day in the three-day deprivation condition. On the first deprivation day, participants in the one-day deprivation condition tended to experience more craving for rice than participants in the three-day deprivation condition. However the difference was not statistically significant. Participants did not, however, increase rice-eating frequency after the deprivation period, compared with the pre-deprivation conditions. This result showed that rice deprivation produced rice craving. Interestingly, the frequency of rice craving was irrespective of how long they were deprived of rice. Increased rice craving does not necessarily lead to overeating of rice. Thus, in the future, we need to examine whether eating rice results in a decrease in rice craving.

Keywords: *food craving, rice, deprivation*

The effect of self-concept on stress coping and mental health, evidence from female students in a Chinese university

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The aim of this study was to measure the effect of self-concept on stress coping and mental health, with particular focus on female students from a Chinese university; and to provide empirical guidance in improving psychological health for female university students. A questionnaire, targeted to 1070 current female students enrolled in an Arts Faculty of a university in Harbin China, was conducted in June, 2009. Informed on the nature of the study, and agreed to cooperate, subjects were given questionnaires and asked to complete these during lecture time. The questionnaire incorporates the following factors: self-concept scale, self-esteem scale, stress coping scale, state-trait anxiety inventory and self-rating depression scale. Two groups are defined as 'only-child' and 'not-only child'. All the above mentioned factors were examined across the two groups. Relationships between self-concept and the rest of the factors were examined by

variance analysis. Regression analysis was used to quantify the impact of self-concept on stress coping and mental health. The scores on the factors of self-concept and self-esteem were found to be significantly higher for the 'only-child' group than those for the 'not-only child' group. No significant difference was observed between the two groups in terms of the stress coping, depression and anxiety. The probabilities of depression are as follows, 0.25 for the 'only-child' group, 0.37 for the 'not-only child' group, and 0.31 for the overall participants. Self-concept and other psychological factors were found to be significantly correlated. A positive correlation was found between the scores of self-concept or self-esteem and the scores of stress coping, and a negative correlation was observed between the scores of self-concept or self-esteem and the scores for anxiety or depression. The study indicates a relatively high rate of depression among the female university students surveyed. Positive self-concept can not only enhance the self-esteem and promote the behaviors of effective stress coping, but also decrease the rate of anxiety and depression. As a result, psychological health is improved.

Keywords: *self-concept, stress coping, mental health, females, university students*

The effect of sleep deprivation and recovery on subjective appetite and cravings: A pilot study

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A growing body of epidemiological studies has demonstrated a link between obesity and sleep deprivation. Laboratory studies suggest self perceived hunger and cravings for calorie rich foods increase following sleep deprivation; however, these factors have not been examined during subsequent recovery following sleep deprivation. The aim of the current study was to examine appetite and food cravings in healthy adults following moderate sleep deprivation with two different recovery conditions. Six males and five females (age: mean \pm SD, 23.8 \pm 4.7 yr)

were allocated to one of three conditions each commencing with a baseline night and ending with an ad libitum sleep. Experimental conditions consisted of one night of sleep deprivation followed by either 6 x 6-h or 6 x 9-h sleep opportunities. The control condition consisted of 7 x 9-h sleep opportunities. Subjective hunger and food cravings were assessed at regular intervals during wake periods using visual analogue scales and a brief questionnaire, respectively. Food cravings were split into four categories: sweet carbohydrate/fat (e.g. chocolate), savory carbohydrate (e.g. potato chips), protein (e.g. meats) and carbohydrate (e.g. potato). Changes in self perceived hunger and food cravings across time and between conditions were analysed using repeated measures ANOVA. There was a significant effect of condition for hunger such that the experimental conditions reported significantly lower levels of subjective hunger than the control condition ($p < 0.01$). No significant effects across time or between conditions were found for food cravings. In contrast to previous studies, there was no difference in self perceived hunger or cravings following sleep deprivation. There are two possible explanations for these findings. Firstly, although this study included females there were unequal gender balances within conditions, such that the control condition contained more males than females. Females have a lower daily energy requirement than males and this could account for the difference in hunger ratings across the conditions. Secondly, previous studies have restricted participants from eating during the day of testing. This may influence self perceived hunger and cravings for calorie rich foods. This pilot study raises a number of methodological issues that should be considered in future research.

Keywords: *sleep problems, hunger, obesity, food craving, appetite*

The effect of social environmental factors on the adaptation process after social exclusion

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Eisenberger et al. (2003) found that social exclusion accentuates social distress, not only under explicit social exclusion conditions (i.e. individuals were prevented by other players from participating in a social activity: ESE) but also under implicit social exclusion conditions (i.e. individuals were unable to join other players in a social activity because of extenuating circumstances: ISE). However, self-regulation of this distress occurred only under the ESE condition. On the basis of these results, it can be proposed that although ISE included only the estimation process of impact resulting from social exclusion, ESE included also the regulation process of the impact. On the other hand, it has been found that some social environmental factors have negative or positive impacts on a series of treatment processes of social distress. Previous research revealed that availability of social support moderates the impact of social distress, and high-maintenance interactions have negative effects on self-regulation of social distress. Therefore, the present study examined what influence processes exist between these social environmental factors and the impact of ISE and ESE. In particular, we focus on the daily high-maintenance interactions with family members and friends, and the support of family or peers. University freshmen ($n = 56$) individually participated in a laboratory experiment that ostensibly used instant messaging through a computer network. They participated in all of three experimental conditions (i.e. ISE, Inclusion and ESE). Before and following each experimental manipulation, participants rated their current level of need satisfaction as an index of social distress. Results of path analyses showed that greater peer (not family) support predicts lower social distress in ISE conditions, but not in ESE conditions. In contrast, the results showed that a higher frequency of high-maintenance interactions with family member or friends predicts greater social distress in ESE conditions, but not in ISE conditions. Taken together, we discuss the effects of each social environmental factor on the adaptation process after social exclusion. The results of the present experiment suggest that social support and high-maintenance interaction probably have different impacts at different times in a series of adaptation processes.

Keywords: *social exclusion, social distress, self-regulation, social support*

The effect of the 'shoe size' hierarchy in judgments of teacher status

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To aim of this study was to determine whether the age of students taught has an effect on the perceived status of teachers. A group of 80 teachers and non-teachers rated the status of a list of different occupations that included three different teaching roles: early childhood educator, primary teacher and secondary teacher. Both groups rated secondary teachers as having the highest status, followed by primary teachers, and finally early childhood educators. Non-teachers rated each of the three teaching roles as higher status than teachers, however non-teachers tended to be more generous than teachers in their status ratings overall. This finding indicates that perceived teacher status is affected by the relative 'shoe-size' of the students that they teach. Specifically, the younger the child, the lower the perceived status of those who teach them.

Keywords: *perceived status, teachers, shoe-size hierarchy*

The effect of the attribution for academic achievement on academic expectancy and performance: A meta-analysis

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This study investigated the impact of the attribution for academic outcome on academic expectancy and performance by means of meta-analysis. This meta-analysis was based on a self-attribution theory and explanatory style, and presented the outcome of a pilot study. Computerized database searches, manual searches in several journals, and reference list searches were conducted. Criteria were set up to identify usable studies in this meta-analysis. A 95% confidence interval estimate was performed to examine the significance of the average of effect sizes (d). Twenty four studies were collected, including 14,190 participants, which provided 83 and 29 effect sizes

respectively for achievement performance and academic expectancy. With regard to positive academic events: (a) the attribution of ability and effort was significantly predictive of academic achievement (d=.67 and .54 respectively); (b) the attribution of ability and effort was significantly predictive of academic expectancy (d=1.11 and .91, respectively); (c) the attributions of stable and unstable factors were both significantly predictive of academic achievement (d=.45 and .40, respectively); (d) the attributions of stable and unstable factors were both significantly predictive of academic expectancy (d=.59 and .66, respectively); (e) the internal locus of control was significantly predictive of academic and performance and expectancy (d=.58 and 1.01, respectively); (f) the attributions of controllable and uncontrollable factors were both significantly predictive of academic performance (d=.31 and .10, respectively); (g) the attributions of controllable and uncontrollable factors were both significantly predictive of academic expectancy (d=.91 and .50, respectively). With regard to negative academic events, the external locus of control was significantly predictive of academic expectancy (d=.62). Self-attribution theory and explanatory style seem partially supported. The attribution of positive events to stable, internal, and controllable factors could contribute to academic performance and expectancy. The predictive power of the attribution of unstable or uncontrollable factors was less but significantly positive. This was a pilot study and more studies will be collected in order to verify the above results.

Keywords: *self-attribution theory, academic achievement, academic expectations, explanatory style, attribution*

The effect of the leadership styles on the perceived organizational support: The moderating role of implicit misattribution

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Leadership styles such as transactional leadership and transformational leadership can exert an influence on perceived organizational

support. However, an empirical study we reported has revealed that the aforementioned impact is moderated by employee implicit misattribution. This research can help us understand how leadership styles impact on staff. Particularly, the study of implicit misattribution can keep the real result from being suspected and from misgiving the staff. We measured Implicit Misattribution by the Implicit Association Test (IAT). In the IAT, the concept words included the words expressing success and those not expressing success; the attributive words included the words expressing external attributes and the ones expressing internal attributes. Meanwhile, participants were required to complete the scales including dimensions of leadership styles and perceived organizational support. Preliminary results showed that the relationship between transformational leadership and perceived organizational support is positive, and the relationship between transactional leadership and perceived organizational support is negative. Implicit Misattribution plays a moderating role in the relationship between leadership style and perceived organizational support. For those with external attribution, the positive relationship between transformational leadership and perceived organizational support was stronger, and the negative relationship between transactional leadership and perceived organizational support was stronger. For those with internal attribution, both positive and negative relationships were weaker. Quantitatively testing Implicit Misattribution is a challenge. Based on the above results, we expect that leadership styles can affect perceived organizational support in a certain pattern, depending on employee implicit misattribution.

Keywords: *leadership style, attribution, organizational support, employee*

The effect of the type of median strip on drivers' subjective sense of speed

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As many have admitted, the design based on human factors is an important factor for safety as well as the improvement of safety-facilities.

The original purpose of median strips was to prevent veering vehicles, as with the center-line invention, however, the type of median strip has an influence on drivers' subjective sense of speed. When it comes to visual information, Edge Rate and Global Optic Flow are the most influential parts that affect drivers' subjective sense of speed. We have tried to determine whether there is a difference depending on the type of median strip. Sixty participants who had a driver's license attended the study. The test conditions were forms of concrete and guardrail and pavement markings and we used a simulation program which was developed to describe a real traffic situation, with three types of median strip. The participants were asked to push the button when they sensed each speed – 60km/h, 80km/h and 100km/h – and the responses measured. All conditions were repeated randomly. The condition of guardrail had the fastest sense of speed among all condition. As the one way ANOVA result showed, there was a significant difference when participants responded at 60km/h ($F=3.69, p<.05$). Moreover, there were significant differences when participants responded at both 80km/h ($F=3.69, p<.05$) and 100km/h ($F=3.39, p<.05$). This study showed that the types of median strip have an influence on drivers' subjective sense of speed. Therefore, we conclude that designers should develop the median strip according to drivers' subjective sense of speed and the effect of median strips, making more effective safety-facilities on the road. We also need to consider other factors that affect drivers' subjective sense of speed, such as road environment.

Keywords: *driving, median strips, sense of speed, visual information, speed*

The effect of work orientation and identification within organizations of separation prevention

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While employees' job change and separation rates have been increasing due to the worsening employment environment because of recession, companies have strived to secure excellent

human resources. This is a common problem throughout the world. In Japan, 66% of companies answered "securing excellent human resources" as an issue for their personnel policy (Nissei report 2008). Shein (1978) proposed that for career planning and career development, activities aiming to increase employees' involvement is important. In this study we examined the effect of employees' work orientation and identification to the companies of their intention for job change and in-company career vision. We predicted that employees' levels of identification to their organization mediate the relationship between their work orientation and job change and career vision. In this study work orientation was divided into two categories, "goal-accomplishment orientation," and "human relationship orientation". Furthermore, we classified identification into three categories, which were identification to the company itself, division, and superiors and colleagues. The participants were 219 people including general employees and management levels. Survey forms were collected by mail. The survey content was as follows; (1) measure of orientation for work, (2) identification, (3) job change intention, and (4) in-company career vision. Path analyses were conducted respectively for rank and file employee and management levels. The results showed that "human relationship orientation" directly predicted higher career vision in the rank and file level ($\beta=.23$, $p<.01$). Also, both "goal-accomplishment orientation" and "human relationship orientation" were completely mediated by identification to the company to predict lower job change intention ($\beta=-.34$, $p<.001$). On the other, for management level employees, "goal-accomplishment orientation" was partially mediated by identification to their superiors and colleagues to predict their lower job change intention ($\beta=-.29$, $p<.01$). Taken together, for rank and file level employees, the higher the work orientation, the higher their identification to the company itself becomes, and this organization level identification suppresses their job change. However, for management level employees, personal level rather than organization level identification plays the role of mediation. These results suggest that mediation processes between work orientation and job change differ by job class.

Keywords: *work orientation, organisation, separation prevention, job changes, career*

The effectiveness comparison of existential-humanistic group therapy for self-esteem development of male prisoners in central prison of Mashhad

HASSANABADI, H.

Since self-esteem has a central role in crime as well as prisoners behaviour. On the other hand, according to literature, the existential-humanistic therapies can influence self-esteem, so the aim of this research was to examine the effect of existential-humanistic group therapy (EHGT) on developing self-esteem among the male prisoners in the central prison of Mashhad (Iran). This study was based on pretest-posttest control group design. 24 inmates were randomly located at two intervention and control groups. Only the first group received a 15 session course of EHGT. Both two groups were tested by Rogers self-esteem inventory, before, after and one month after therapy termination. In comparison to control group, results showed that the intervention group self-esteem was developed meaningfully during post and follow-up period, i.e. EHGT can help to reduce prisoners' personality weaknesses. Nevertheless there are different factors which affect inmates' self-esteem and are out of our control. This finding not only is useful to forensic therapists but also for other practitioners such as family and school counsellors.

Keywords: *self-esteem, crime, prisoners, existential-humanistic therapies*

The effectiveness of a positive parenting program and mental health of mothers of children with attention deficit/hyperactive disorder

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The current research examined the effectiveness of a Positive Parenting Program on mothers of 4-12 year-old children with attention deficit/hyperactive disorder. The study used pre and post-test method with a control group. In a quasi-experimental study, mothers of 20

children with attention deficit/hyperactivity disorder were selected from two university-affiliated health institutes and randomly allocated into Experimental and Control groups. The experimental group sustained an 8 session instruction of the Positive Parenting Program. The subjects were assessed by a General Health Questionnaire at 3 time-points (before and after treatment and follow up). The data was analyzed by Multivariate Covariance Analysis. The findings showed that the program caused significant mental health improvements in the experimental group compared to the control group mothers. Thus, in conclusion, the Positive Parenting Program was effective for improving mothers' mental health with children with attention deficit/hyperactive disorder. Therefore, it is recommended this method should be used for mothers of such children.

Keywords: *positive parenting, mental health, Attention Deficit Hyperactivity Disorder*

The effectiveness of stress management and active listening training for Japanese workers

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Managing mental health problems in workplaces is becoming a serious issue in Japan. The ministry of Labor (the present ministry of Health, Labor and Welfare) has established guidelines for promoting mental health in work places in 2000, aimed at encouraging each organization to develop and practice their own mental health programs. In the guidelines, it is recommended that workers should know how to manage stress by themselves. The present study was undertaken to examine the effect of stress management and active listening training. Active listening is the listening skill based on the "Three basic therapist conditions" suggested by Rogers. Participants were 95 Japanese workers in their third year after entering the company, ranging in age from 20 to 27 years ($M=24.3$, $SD=1.3$). The training was given in September 2009. The Active Listening Attitude Scale (ALAS) and Brief Job Stress Questionnaire (BJSQ) were completed by participants before training and one month after the training. Thirty one males ($M=24.9$

years old) and 34 females ($M=23.7$ years old) without serious life event experiences before filling out post-questionnaires, were used for further analysis. The scores of pre- and post-training were compared using a paired t-test. There was a significant difference in ALAS scores between pre-training and post-training ($36.7(SD=5.9)$ for pre-, $38.5(SD=5.5)$ for post-, $t=2.415$, $df=64$, $p<.05$). There were significant differences in two subscales of BJSQ in males: the score for "amount of psychological load of work" increased after the training ($5.0(SD=1.6)$ for pre-, $5.7(SD=1.6)$ for post-, $t=2.469$, $df=30$, $p<.05$). "Stress of interpersonal relationships in the workplace" was also increased after training ($8.7(SD=2.0)$ for pre-, $9.3(SD=2.0)$ for post-, $t=2.039$, $df=30$, $p<.05$). Higher scores for these indices indicate lower degrees of stress. We conclude that these results revealed that our training is highly effective for younger workers to improve listening skills to manage stress of interpersonal relationships in the workplace.

Keywords: *stress management, active listening training, Japanese, mental health problems, workplace*

The effects of emotional intelligence on facial expression and identity recognition

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Emotional intelligence (EI) refers to competencies in processing and managing emotion. We examined the relationship between EI and recognition of facial expression or facial identity by using a selective attention task. We hypothesized that high EI relates to superior recognition for facial expression in particular. Participants were asked to recognize the expression or identity of faces while irrelevant dimensions of identity or expression were held or varied. Participants then completed scales for EI. Results showed that EI correlated significantly with expression recognition in the case that facial identity is held. However under condition of varied identity, correlations between EI and expression recognition were weak or not significant. Also, correlations between EI and identity recognition were weak

or not significant. These results suggest that relationships between EI and facial expression recognition varied with facial identities.

Keywords: *emotional intelligence, facial expression, identity, emotions, expression recognition*

The effects of general-self-efficacy on causal attribution and coping behavior in negative interpersonal situations

NOGUCHI, Y. (Gakushuin University)

The purpose of this study was to see whether general-self-efficacy (GSE) would affect causal attribution and coping behavior in negative interpersonal situations. GSE is one aspect of self-efficacy which has an influence on long-time performance and general behavior tendency. Miyake (2000) found that men with high GSE tended to fail more on the test to internal and controllable causes than those with low GSE. In addition, high GSE men and women adopted more active coping behavior. However, the effects of GSE on attribution in interpersonal situation have not been clear. Considering that negative interpersonal events have a great impact on our mental health, there is a need to examine the influence of GSE on causal attribution and coping behavior in interpersonal situations. There were two specific hypotheses. First, people with high GSE would attribute negative personal events to more internal and controllable causes than those with low GSE (hypothesis 1). Second, high GSE individuals would adopt more positive coping behavior than those with low GSE (hypothesis 2). To test these hypotheses, two negative personal events were described. One event was quarreling with a close friend (situation A) and the other was an awkward silence at a party (situation B). Participants were asked to imagine themselves being faced with the events, and to rate the likelihood of six probable causes and how important they were for them. Furthermore, they completed Interpersonal Stress-Coping Inventory and GSE scales. Ratings of causal attribution in each of the situations were analyzed separately, with significant differences found only in situation B. Contrary to hypothesis 1, people with low GSE tended to attribute negative interpersonal events more to internal

causes than those with high GSE. This result may be interpreted as individuals with high GSE making causal attribution in a self-protected manner. The hypothesis concerning coping strategies (hypothesis 2) was supported, as it was found that high GSE individuals adopted more positive coping strategies than those with low GSE.

Keywords: *general-self-efficacy, causal attribution, coping strategies, interpersonal situations, general behavior tendency*

The effects of give-or-take frame, receiver's expectation, and amount of money on repeated dictator game

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PENG, S-Y. (National Chiao Tung University)

The purpose of the study was to examine the "give or take" frame, the receiver's expectation, and the amount of money on repeated dictator game. One hundred and sixty-one participants were randomly assigned to frame (give, take, neutral) by receiver's expectation (expectation vs. no expectation) conditions to work on four dictator games with a large or small sum of money. Frame and receiver's expectation were between-subject variables manipulated by the linguistic cues and rules of the game in the cover story. Amount of money and practice were two within-subject variables. The dependent variable of the study was the ratio of money the dictator allotted to the anonymous receiver. Results showed that the most significant factor affecting dictator's decision was the amount of money to be distributed. Participants became more greedy (giving less) when the amount of money involved was larger. Give-or-take frame might evoke the social exchange schema and thus slightly increased the generosity of the participants in the dictator game when compared to the neutral condition. But the effect was limited to the second game with the giving frame, and disappeared in the remaining games. Participants who were told that the receivers of the money were waiting for their decisions would allot significantly less money to the other party unbeknown to them in the first game. But this effect disappeared in the remaining games. Individual differences may be the dominant factor affecting people's decision

in dictator game. Factors such as frame or receiver's expectation affect decisions in dictator game only temporarily. The finding that people giving less when knowing that the others are waiting for the outcome of their decision is quite intriguing and needs further clarification in the future study.

Keywords: *give or take frame, receiver expectation, dictator game, money*

The effects of integrated after-school career counseling program on students' career maturity: A case study of Loei Home After-school Program, Thailand

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The aim of this study was to compare the pretest and posttest scores on the career maturity of an experimental group, and to compare the posttest scores on career maturity between the experimental group and the control group. The samples were 9th grade students. They were randomly assigned to an experimental group or control group. Each group comprised of 8 students. The experimental group participated in the integrated after-school career counseling program conducted by the researcher. The instrument used for data collection was the career maturity inventory (Crites, 1978). Data was analyzed to obtain a mean, standard deviation and t-test. The results indicated that, compared to a control group, students who participated in the integrated after-school career counseling program improved their career maturity. The integrated after-school career counseling program is an effective way to enhance the after-school program and focus on the needs of high-risk students and help them develop the decisional attitude and competencies that increase readiness to deal with career-choice tasks and facilitate behavioral responses that meet these tasks.

Keywords: *career readiness, career maturity, students, career counselling, decision making*

The effects of orexin-1 receptor antagonism on alcohol self-

administration and relapse behaviour in rats

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Increasing evidence suggests that the environment and reinforcement play a key role in the motivation to consume alcohol and the propensity for relapse. The orexin system in the brain has been implicated as part of the neurobiological mechanism(s) driving these behaviours. The current study aimed to (1) investigate whether the selective orexin-1 receptor antagonist SB-334867 could reduce the motivation to self-administer alcohol and (2) examine cue-induced alcohol-seeking following prolonged abstinence in alcohol-preferring (iP) rats. Intra-peritoneal injections of SB-334867 or vehicle were administered prior to operant sessions under fixed ratio ($n = 20$) and progressive ratio ($n = 18$) schedules of reinforcement. Rats were then withdrawn from alcohol for 7, 14, 28 or 56 days, following which they were allowed to respond in the presence of alcohol-related cues but in the absence of reward. Results indicated that SB-334867 attenuated volitional alcohol self-administration and alcohol break points. Furthermore, rats displayed robust cue-induced alcohol seeking following all periods of abstinence and SB-334867 attenuated this response in rats abstinent for 14 days. The results further implicate orexin in the modulation of the rewarding effects of alcohol and the salience of alcohol-related cues.

Keywords: *Orexin, alcohol-seeking, alcohol, reward, rats*

The effects of package design of mineral water on the content evaluation

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The purpose of this study was to examine the effect of brand (package design) on the evaluation of taste using mineral water. A 2

(content: mineral water versus tap water) × 2 (package design: national brand of mineral water versus “tap water”) experimental design was employed, and the research was conducted on a total of 55 participants. In order to judge the quality of the water, 6 items (7-point scale) were used. The main findings were that, in the content of the bottle, “mineral water” was evaluated higher than “tap water”, and in package design, “mineral water” also increased the evaluation of quality. These results suggest that not only objective quality of water but also brand (package design) affects the consumers’ perceived quality.

Keywords: package design, mineral water, content evaluation, brand, consumers

The effects of personal interaction on seeking information about crime prevention measures

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Prior study has suggested that close relationships among neighborhood residents reduced violent crime victimization risks, but the mechanism for this has not been clearly investigated. One theoretical hypothesis is that personal interactions with others in neighborhood promote an individual’s willingness to seek further information about crime prevention. Thus, this study attempted to identify the effects of personal interaction with others on a person’s willingness to prevent crime and on an incentive to seek information about crime prevention measures. In a web-based survey conducted in Japan, mothers (N = 1040) with three to 12 year old children were asked to complete a questionnaire that measured the amount of personal interactions with others in their neighborhoods (i.e., the breadth of their social network and the frequency of conversation with others), her willingness to prevent crime, and the frequency of seeking information about crime prevention measures on the Internet. Structural equation modeling gave the following results: (1) Overall, a wide social network increased the frequency of conversations about children’s safety with neighbors, and such conversations encouraged mothers to seek information about crime

prevention by making them realize their own responsibility in crime prevention and increasing their willingness to cooperate with neighbors.; (2) However, for some mothers, such conversations increased their willingness to defer crime problems to the police and government, and that decreased their incentive to seek information about crime prevention; and (3) When a wide social network increased the frequency of conversations about news contents, such conversations indirectly decreased information-seeking through a willingness to defer crime problem solving to the police and government. In sum, the results indicated that personal interaction with others had significant effects for mothers of young children to seek information about crime prevention measures. But these effects depended on types of willingness being aroused (i.e. a realization of the individual’s own responsibility in crime prevention, the individual’s willingness to cooperate with neighbors, and the individual’s willingness to defer crime problem solving to the police and government).

Keywords: personal interaction, crime prevention, information seeking, Japan, social networks

The effects of reading the picture books and the video picture books on the children’s understanding of the stories

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Reading picture books to children is the important educational activity for child daycare and parenting. Recently, the video picture books are being used as a similar teaching material. The meaning of the picture books and the video picture books has been discussed a lot at many occasions in the past, however, it has not been clarified that what kind of influences these picture books and video picture books actually give to children’s understanding of stories. In addition, it also has not clarified that there is any effect difference by group size such as style of one to one, a small group, or a big size group, when the picture books or the video picture books are read. The effects of the picture books and the video picture books of children’s

understanding of book stories by group size, age, and material was studied in this research. The subjects were three year old ($N=49$), four year old ($N=60$), five year old ($N=71$) kindergarten children. The effects were measured using content of the story scales. Reading a picture story one-to-one was more effective in three year old children, and both reading a picture story and a video picture story were effective in five year old children. For reading a video picture story by the large group situation, the higher scores of the story understanding were at the beginning and the ending contents of a story. According to this result, we suggested that we should have enough time to start to read and to finish reading the story.

Keywords: *picture books, children, stories, education, comprehension*

The effects of self efficacy on the outcome of a group cognitive-behavioral intervention including self-monitoring method

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The purpose of this study was to investigate whether degrees of self efficacy (SE) are associated with physical activities or psychological factors after self-monitoring intervention. The subjects found in this study consisted of 49 female college students. We put the subjects in three groups, according to ones degree of SE: high SE group, middle SE group and low SE group. We conducted an intervention study using group cognitive behavioral intervention including the self-monitoring method. We performed a psychological assessment in order to examine SE, self esteem and stress responses, while also applying experimental protocol in the pre, intervention and post period stages. ANOVA of exercise volume disclosed significant group \times period interaction. The significant period effect was disclosed in exercise volume and total energy expenditure. In the post period, low SE group showed a significantly lower exercise volume than high SE group. Low SE group had a significantly lower exercise volume, total energy

expenditure and step counts in the post period compared in the intervention period. In conclusion, after we applied group cognitive behavioral interventions including the self-monitoring method, we discovered that high SE promoted the habituation of exercise while also inhibiting the risk of rebound. Apathy was decreased in only the subjects categorized with low SE using group cognitive behavioral intervention including the self-monitoring method.

Keywords: *self-esteem, self-efficacy, self-monitoring, cognitive behavioural therapy, physical activity*

The effects of the breath-training program on reducing the stress-symptoms of the CHD patients

SRISAYEKTI, W. (Padjadjaran University), FARDIANI, (Padjadjaran University)

This study intended to determine whether the Indonesian traditional breath-training program 'Merpati Putih' had therapeutic aspects for patients with coronary heart disease (CHD). The aim was to find out whether the training could reduce the stress-symptoms of the CHD patients in Bandung, Indonesia. The study was a continuation of the empirical findings reported by the members of the organization of the 'Merpati Putih'. 20 clinically stable CHD patients (determined by the doctor), 10 males and 10 females, 40-60 years old ($M = 50.1$; $SD = 4.8$) participated in this study. They were diagnosed with CHD with artery coronary stenosis $> 75\%$ in at least one coronary artery, recommended by cardiologists for regular medical treatment whether or not they had received percutaneous coronary interventions (PCI) or a coronary artery bypass graft (CABG). The study consisted of 13 sessions, twice a week, two hours per session. Interrupted time-series with multiple replications design (Cook & Campbell, 1979) was applied. The stress symptoms were measured by the adapted questionnaire (Severin, 2002), and a sphygmomanometer was used for blood pressure, and manual measurement with a stop watch for heart beat. Results showed that the breath-training program reduced the stress-symptoms (questionnaire $\chi = 225.878$, $p = .05$; blood pressure $\chi = 154.224$, $p = .05$; heart beat

$\chi = 28.938, p = 0.05$). The Indonesian traditional breath-training program 'Merpati Putih' had therapeutic aspects for patients with CHD. The social supports provided by other participants should be discussed. The results should be further investigated before the training is implemented and recommended for the CHD patients.

Keywords: *traditional breath-training, merpati putih, coronary heart disease*

The effects of the timing of judges' instructions on the verdicts of jurors

ARAKAWA, A. (Nagoya University), KAWANO, N. (Nagoya University)

Since 2009 Japan has been using the Saiban-in system where six lay jurors must cooperate with three professional judges to determine and explain a verdict. However, some reports have shown that Japanese lay people tend to nullify the law in specific situations including, importantly, cases involving contested criminal responsibility. Because judges' instructions seem to play important roles in preventing nullification by juries, it is important to identify instructions that are effective in this regard. The current study examined the effects of the timing of a judge's instructions regarding responsibility on the verdict reached by a jury. Sixty seven undergraduates participated in the experimental scenario, and participants completed questionnaires after reading a scenario which involved a murder case where the defendant pleaded "not guilty by reason of insanity." Respondents were asked to: (1) choose between "guilty" or "not guilty by reason of insanity"; (2) explain the reasoning behind their answer to item (1); (3) rate the confidence in their verdict on a 5-point Likert scale; and (4) explain the lack of confidence in their verdict, if appropriate. Participants were assigned to one of the condition of (a) instruction-preceded (the judge's instructions about legal responsibility preceded presentation of the scenario) or (b) scenario-preceded (the presentation of the scenario preceded the judge's instructions about legal responsibility). Forty-one participants reached a verdict of guilty and 21 chose the other option. The rate of favoring "not guilty by reason of insanity" was lower under the

instruction-preceded condition than under the scenario-preceded condition ($\chi^2(1) = 2.882, .05 < p < .10$). On the other hand, no significant difference between the groups with respect to participants' subjective certainty was found. These results suggest that the timing of judges' instructions affects the verdict reached by jurors. More specifically, instructions underscoring legal responsibility led jurors to uphold the law when such instructions preceded the scenario.

Keywords: *judges, jurors, verdict, judge's instructions, Japan*

The effects of variations in placing diagrams within items of a Japanese language reading test

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The purpose of this study was to examine if the manner of presentation affects item difficulty in a Japanese language reading test. Study 1 identified items with low difficulty and discrimination. Study 2 examined whether the way in which the diagram is presented affects item difficulty and discrimination in the test. In this study, item difficulty was the proportion of correct, not the mean of item response theory. In study 1, junior high school students in South Korea ($N=232$) were administered a translated version of the Gunma Prefecture Achievement Test. In addition, the data of Gunma Prefecture Achievement Test administered in 2006 was studied. In Study 2, students in Japanese junior high school ($N=778$) were assigned to one of test O ($N=250$), test N1 ($N=170$), test N2 ($N=180$) and test N3 ($N=178$) groups. Students had 50 minutes to answer. The researcher rated based on the answer rubric. In study 1, item difficulty and item discrimination of this test were analyzed. The results showed an item showed low difficulty and discrimination when it featured a diagram composed of two blank spaces presented by two words which were reversed of the original order in the text, and accompanied by a hint alongside these spaces (O). In study 2, therefore, the effects of placing blanks and hint placements were examined, composing four distinct versions: test O, test N1, test N2 and test N3. Test N1 featured a diagram

composed of two blank spaces presented by two words which were altered in presentation order, and accompanied by a hint underneath these spaces. Test N2 was composed of two blank spaces presented in the same order as in the original text with the hint alongside them, while test N3 had it underneath them. It was found that N2 and N3 were high in both difficulty and discrimination. Item difficulty increased more than 0.2 points. It was observed that item difficulty and discrimination was high when two blank spaces were placed in order of text. It was concluded that the manner in which the diagram is placed affects item difficulty and discrimination on testing.

Keywords: *Japanese, diagrams, effects of variations, discrimination, difficulty*

The enrichment of the Theory of Zone of Proximal Development from the affective dimension

LU, J. (Shanghai Normal University)

Vygotsky, the founder of the psychology science in the Soviet Union, pinpointed the theory of "Zone of Proximal Development", which refers to the "Distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky). Vygotsky insisted that the difficulty of teaching contents should be within the range of Zone of Proximal Development. However, it only remains the focus on the domain of cognition. How to trigger students' motivation to jump seems lacking in evidence in Vygotsky's research. In this case, based upon Vygotsky's theory etcetera, we put forward the Affective Teaching Strategy – the Strategy of Exceeding Expectations, which aims to not only spark the students' interest but also provide them with an impetus to their learning. The strategy has two kernels, which are that the stimuli beyond expectation can trigger surprise, and the surprise can be transformed into interests. The strategy was conducted in the form of field experiments. The subjects of the experiment were two classes of students in Senior High One. A mathematics

teacher gave lessons to the controlled class with traditional methods, while giving the experimental class the Teaching Strategy of Exceeding Expectations. When the math teacher presented a new lesson, he asked an unexpected question. "If I have news to release, but every one only has two minutes to tell another two students spontaneously, and you can tell no one else. Suppose there are 600,000 people in this area, how fast can the news be spread all over?" Three minutes later, the teacher unveiled the answer, "only forty minutes!" All the students felt astonished, since then the teacher began the new lesson "Sum of Geometric Progression". The experiment verified that it is possible to exert the Strategy of Exceeding Expectation in mathematics teaching by furnishing the texts with affection. Furthermore, it was also testified that the Strategy of Exceeding Expectation in math teaching functions as the regulator to students' learning sets, the improver of their cognitive learning as well as the teaching effects. Vygotsky's theory of "Zone of Proximal Development" elaborated the reasons that teaching should be within the Zone of Proximal Development from the cognitive dimension. As we proposed, the conditions of teaching should be within the Zone of Proximal Development from the affective dimension, which can trigger the students' desire for "jumping to reach". Since then we put forward the corresponding Affective Teaching Strategy - Strategy of Exceeding Expectations which combined cognition with emotion to solve the problem of "promoting students' initiative by teaching".

Keywords: *developmental level, affective teaching strategy, mathematics, expectations, teaching*

The experience of children unexpected loss: A case study

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Unexpected loss appears as a result of an unanticipated event, for which it is impossible to prepare in advance. The case study takes into consideration the loss and suffering aspects of brothers and the unique nature of this suffering. It underlines that every child reacts to pain in his own manner, even if they are part of the same family, have suffered the same psycho trauma

and have had bad news given to both of them at the same time. The paper presents the emotional answer of brothers that have suffered a loss, the young brother death. Family drawing was used as a diagnosis and therapeutic child approach. From the psycho diagnosis point of view, it was the right approach to better know the family structure, the existence of guilt feeling and the trauma impact on the child. Therapeutically, the drawing was a provocative technique for starting a guided dialogue towards self-consciousness and improvement. The family drawing procedure was an efficient diagnosis and psychotherapeutic method for the disclosure of unexpected loss experience and child suffering. The loss experience was different for the two brothers: for one of them, the black clothes were associated with death and suggested a certain separation from someone close, the other one felt responsible for the accident ("If I stayed home, he didn't fall down") and still waiting for the brother return. The obtained results allowed the parents to know the real feelings of their children, their place within the family and the relationships between the family members. Each painful experience is unique. Loss experience is different from one child to another, even if they belong to the same family and were the witnesses of the same trauma. Using psycho-diagnosis method, the family drawing procedure was useful in revealing the feelings of loss and the expectations regarding the event. The psycho therapeutic approach must be individual, as well as intra-family group. Children must be listened and helped during the whole suffering process, supported during their emotional recovery. The body fights against illness, with or without pills. Love and constant affection within the family heal the deepest wounds.

Keywords: *unexpected loss, child trauma, child suffering, family drawing, child and family therapy*

The factors which reduce the effects of the enlighten education on date domestic violence for high school students

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Recently, domestic violence (DV) has become one of the big social problems in Japan. Especially Date DV, that is DV in an unmarried couple, has been paid attention to, because it affects young people and starts during junior high school days. Study 1 investigated the effects of enlighten education of Date DV on high school students and the factors that block the effects. Study 2 investigated its effectiveness for University students who have, or had, steadies (i.e., a steady relationship). In study 1, the subjects are 2402 high school students (727 boys and 1675 girls, 28 unidentified). After the enlighten education, a questionnaire was completed. Before the enlighten education, 74% of them did not know about Date DV. After the education, 89% of them perceived physical violence as Date DV, 94% of them perceived mental violence as Date DV, and 84% of them perceived restriction as Date DV. This showed the effects of this enlighten education. But 20% of them who have, or had, steadies ($n=1268$) perceived restriction as positive, even after the enlighten education. They agreed to the opinion that being restricted in seeing their friends by their steadies is not bad because it is caused by their steadies' love. Those who did some Date DV perceived mental violence as a form of DV less than those who did not ($t = 5.53, df = 928, p < .01$), and those who had performed mental violence also perceived it as a form of DV, less than those who had not ($t = 6.45, df = 918, p < .01$). For restriction, the same results were shown. This suggested the tendency to tolerate Date DV in youth, with their steady, and with some experiences of DV. In study 2, the subjects are university students (108 women). The questionnaire consisted of five cases of Date DV: checking partner's cellular phone, restriction of their behavior, mental violence, physical violence and sexual violence. It was investigated which cases they regard as examples of Date DV and whether they can reject, or not, Date DV in these cases. This study showed a difficulty in saying 'No' in serious violence cases, even though they perceived the case as a form of DV. The importance of early education has been suggested.

Keywords: *date domestic violence, enlighten education, young people*

The father-child relationship in childhood and family structure in late adolescence

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The aim of this study was to examine the association between the father-child relationship in childhood and family structure in late adolescence. Fifty-eight university students participated in the study. Their average age was 20.6 years. To assess family structure the participants were administered the Family System Test (FAST; Gehring, 1993), which is a figure placement technique focusing on family cohesion and hierarchy. Our previous study using this instrument among Japanese university students indicated that family cohesion was perceived explicitly but family hierarchy was not. Therefore, we changed the size of the original blocks so that family hierarchy would be expressed more explicitly in a Japanese sample. The Scale of Psychological Presence of Father (SPPF; Matsunaka & Miura, 2006) was used to assess the participants' relationship with their fathers in childhood. The SPPF consisted of 5 subscales; positive views of his/her father, discipline, father-child communication, protection and recognition, and family communication. The internal consistencies of these subscales were relatively high ($\alpha = .72 \sim .82$). The results of the FAST indicated that 19 people were categorized as a 'Balanced' type, 19 as 'Liable-balanced,' and 20 as 'Unbalanced' types. ANOVA was conducted with 3 types of family structure as an independent variable and the SPPF subscale scores as dependent variables. Significant differences were found only on the subscales of 'positive views of his/her father' and 'protection and recognition.' The means and standard deviations of subscale scores in each type were as follows: 'Balanced,' 24.16 (SD 4.18); 'Liable-balanced,' 20.05 (SD 4.12); 'Unbalanced,' 21.65 (SD 4.60); for the score of 'positive views of a father,' $F(2,55) = 4.38, p < .05$, and 10.53 (1.74), 8.32 (2.03), 8.45 (2.68), respectively for the score of 'protection and recognition,' $F(2,55) = 6.08, p < .01$. The results showed that students categorized as a 'Balanced' type had significantly higher scores on the subscales of 'positive views of his/her father' and 'protection and recognition' than did

those of 'Liable-balanced' and 'Unbalanced' types. These results suggest that the positive father-child relationship in childhood could be the base of the university students' perception of family structure.

Keywords: *father-child relationship, family structure, adolescence, family cohesion, hierarchy*

The flow experience in the scope of consumption and the study of its correlates

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During the last years the flow achieved a leading role in studies performed on the labor psychology field. Starting with the Moneta and Csikszentmihalyi definition (1996), whereby flow is an extremely enjoyable optimal experience, we established the first goal of this work to apply the flow concept beyond the scope of labor reaching the consumption domain. Thereby, the flow scale developed by Rodríguez, Aguilar, Cifre and Salanova (2003) was adapted to the consumption scenario from a sample of 450 subjects proving its performance for both products and services. The second goal of this work was to determine, for those cases of consumption in which the application of this scale seems to be valid, which other variables the flow is related to involving our experiences of consumption in both traditional and internet shopping. Our outcomes reveal that it is appropriate to use the flow scale in the consumption scope of products but not on services. Furthermore, considering the product sample, the flow keeps significant relationships among the variables dealing with attraction made by shopping stimulus, tending to impulsive purchasing with positive effect in both traditional and internet shopping. The values relationship between both consumption scenarios is very similar. In conclusion, we revised the theoretical implications of the present study and propose future research about the flow experience in the consumption experience.

Keywords: *flow, consumption, labor psychology field, traditional shopping, internet shopping*

The impact of aphasia on couples' communication

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Aphasia, a neurological language disorder, may affect conjugal life. Limited information is available on the impact of aphasia on the couples' communication. Nevertheless, it is an important aspect to study because it may help to improve intervention with couples living with aphasia. The aim of the present research is to document each member of couples' perception of the consequences of aphasia on couple's communication. Nine French speaking couples with one member having chronic aphasia of different types and levels of severity participated in the study. The eighteen participants were met individually in a semi-structured interview in order to gain information on their perception of their communication. The interviews were audiotaped and transcribed. A qualitative analyse was realised. Excerpts of interviews pertaining to communication were selected. These excerpts were resumed with a descriptor, coded and grouped within themes. Five themes emerged from the analysis: appreciation of communication, frequency and length of conversations, topics, types of communicator (initiator of conversation and participator in discussion), feelings and reactions associated to communication. The participants mentioned that the communication was positive before aphasia and that it is now fair or difficult. After the onset of aphasia, conversations are less frequent and the topics are restrained or limited. Many interviewees reported that the communication style from both members of the couple has changed and that the person with aphasia is a less active participant. Difficulty in managing emotions, for both partners, was associated to communication. In addition, some spouses reported that they refrain themselves from initiating discussion on specific topics in order to maintain a positive relationship with the person with aphasia. These results give us a comprehensive view of the communicative consequences of aphasia. They are useful in

orienting interventions that consider the needs of couples living with aphasia.

Keywords: *aphasia, communication, couples, communication, emotions*

The impact of applying case method of teacher's math teaching problem solving ability

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Sophisticated math epistemological belief, constructive pedagogical content knowledge, and teaching problem-solving capability are considered building foundations of a math expert teacher. The researchers adopted a qualitative analysis method to explore how the teaching case method originated teacher professional development program influenced teachers' epistemological belief, pedagogical content knowledge, and problem-solving capability and students' math achievement. The first part of the research was a teacher professional development seminar for 3 math teachers of the learning community group. Discussion materials include: 1. required pedagogical content knowledge in math teaching such as general teaching knowledge, subject content knowledge, learner and learning knowledge, and 2. epistemological belief and problem-solving capability that were obtained from content analysis of three real teaching cases designed based on textbook. In the second part, qualitative analysis method was applied to collect and analyze data gathered from a longitude classroom observation, interview, and reflection journal. The results showed that with construction of situational learning environment and a learning community, the teachers build up a strong connection between teaching theory and practice and fostered critical thinking and problem solving capability. When teachers gained sufficient pedagogical content knowledge and became expert teachers, they were more likely to improve students' math problem-solving capability. Also, the researchers demonstrated that a research combining teacher, textbook, and classroom could generate

research results that could be generalized to improving classroom teaching quality.

Keywords: *teachers, mathematics, problem-solving, case method, professional development*

The impact of communication strategy on forgiveness in different relational contexts: The mediation effect of intent attribution

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The purpose of this study was to examine the effect of communication strategy (telling truth, lying, or concealing) on the emotional response and coping of the receiver in different relational contexts (sibling, friends or couple). Previous research showed that people lied less to close others, such as spouse and family (DePaulo and Kashy, 1998). Although lying has a detrimental effect on family relationships, it would be more acceptable in outside-family relationships because lying to family members might violate one's role obligation, and then resulted in harsh critics (Hsu, Wei, and Chen, 2009). Therefore, telling the truth to a sibling is more acceptable than to friends or spouse, but lying or concealing to sibling is less desirable. Self-oriented communication leads to negative consequences more than other-oriented communication. The study used a 3x3 between-subjects design. Self-designed scenario questionnaire was used to measure the mediating variables and dependent variables. The independent variables were the communications strategy (telling truth, lying, or concealing) and relationship (sibling, friends or couple). The dependent variables were the emotional responses, forgiveness, and future relationship. The intent attribution was the mediator. College students participated in this study. The result showed that the both communication strategy and relationship influenced the evaluation of the communicators and maintenance of future relationships. Though lying was rated worse than concealing or honesty, it was even worse to lie to sibling than to friends or spouse. Self-oriented communication leads to less desirable evaluations than other-oriented communication.

Honesty was regarded as one of the role obligations in family relationships. Therefore, lying to family members violated role obligation, which hazards future interaction.

Keywords: *communication strategy, relational context, lying, role obligation, other-oriented communication*

The impact of expectation sources on indebtedness

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This study aimed to understand Chinese college students in the pursuit of expectations from different sources (oneself, parents), of their life goals after failure and the mediation effect of indebtedness between expectation and behavior intention. Questionnaires were used for the pre-test results, using a structural equation analysis model to explore the structure equation model of life goals, indebtedness, and behavior intention. Two hundred and fifty undergraduates from Chung Yuan Christian University served as participants. When an individual did not attain the goal of high self-expectations, they tended to have strong indebtedness to themselves. On the contrary, when they failed at the goal with high expectations of parents, they felt indebtedness to parents. Furthermore, indebtedness becomes the predictor of subsequent behavior. As the participants felt more indebtedness, they would persist in pursuing the life goals. The source of expectation corresponded to the target of indebtedness and indebtedness served as the motivation for pursuing life goals.

Keywords: *expectation source, indebtedness, Chinese students, life goals, motivation*

The impact of intensive behavioural treatment on children with autism

KHUSHABI, K. (University of Welfare and Rehabilitation Sciences), HOSSEINI, S. B. (Azad University)

The current study examined an intensive behavioral intervention based on the applied behavioral analysis-Lovaas model, for children with autistic spectrum disorders. The sample consisted of 21 children (18 males, three females) aged between 3.1 and 9 years ($M = 5.7$, $SD = 1.6$). There were 17 children with autism, three with Asperger's syndrome and one with childhood disintegrative disorder. All the children met DSM-IV criteria for the relevant disorder. The children have received one to one treatment by trained trainers, four hours a day, six days per week, for a five-month period. The children and their parents underwent multimodal assessment captured on video, at intake, at end of each month of the treatment period and at a two-month follow-up. As part of the assessment, the parents were asked to fill in the Autism Treatment Evaluation Checklist. The results indicated that verbal and nonverbal communication skills, sociability, sensory and cognitive awareness attention and concentration, and physical health were significantly enhanced in the sample. Intensive behavioral treatment would produce significant and durable gains for young children with autistic spectrum disorders.

Keywords: *Autism, Asperger's syndrome, childhood disintegrative disorder, applied behavioral analysis, behavioral treatment*

The impact of intensive behavioural treatment on children with autism

KHUSHABI, K. (Rehabilitation University),
POURETEMAD, H. (Shahid Beheshty), HOSEINI,
S.B. (Azad University)

The current study examined an intensive behavioural intervention based on the applied behavioural analysis-Lovaas model for children with autism spectrum disorder. The sample consisted of 21 children (18 male and 3 female) aged between 3.1 and 9 years (mean=5.7, $SD=1.6$). There were 17 children with autism, 3 with Asperger's syndrome and 1 with childhood disintegrative disorder. All children met the DSM-4 criteria for the relevant disorder. The children received one on one treatment by trained trainers, 4 hours a day and 6 days per week for a five-month period. The children and their parents underwent multimodal assessment

captured on video, at intake, end of each month of treatment, and at a two-month follow-up. As part of the assessment, the parents were asked to fill in the Autism Treatment Evaluation Checklist. The results indicated that verbal and nonverbal communication skills, sociability, sensory and cognitive awareness, attention and concentration, and physical health were significantly enhanced in the sample. Thus, intensive behavioural treatment would produce significant and durable gains for young children with autism spectrum disorder.

Keywords: *Autism spectrum disorder, children, intensive behavioural treatment, Asperger's syndrome, Autism treatment evaluation list*

The impact of morning recovery on task and contextual performance: The addition of an objective measure of performance

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MORRISON, D. (University of Western Australia)

This study examined the utility of morning recovery as a predictor of self-reported task performance, contextual performance and perceived workload, and sought to advance the literature on recovery and performance through the introduction of an objective measure of task performance. Twenty four university students completed a general survey at the commencement of their participation within the study, and then two daily surveys and a cognitive task over the course of one week. Hierarchical linear modeling showed recovery to be positively related to personal initiative above the contribution of person-level and day-level control variables. The hypothesized relationships between recovery and measures of task performance failed to be supported. These findings suggest that feeling recovered in the mornings is not only a pleasurable experience for the individual but may have repercussions for some aspects of work-related task and contextual performance throughout that day.

Keywords: *recovery, task performance, contextual performance, workload, objective measure*

The impact of nutrition intervention programmes on the cognitive development of pupils in early childhood centres in select communities in northern Nigeria

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The importance of nutrition in cognitive development is established in the literature. Relatively higher levels of poverty in northern Nigeria have necessitated the initiation of a number of intervention programs by government, local and international non-governmental organisations and donor agencies. The aim of this paper is to assess the impact of nutrition intervention programs in Nigeria by measuring the direction of differences in the cognitive development of children in three UNICEF intervention communities and three non-intervention communities. It is expected that the null hypotheses will not be upheld, and pupils from the non-participant (control) communities will perform poorer on the tasks and have poorer nutrition statuses than those from the participant communities across the board. Three hundred male and female pupils of early childhood centres in three focal and three non-focal communities in Kaduna State of Northern Nigeria will constitute the study sample. Anthropometric measures will be used to determine the nutrition status of both groups of respondents, while cognitive development will be measured using tests developed by the researchers. Multivariate and descriptive analysis will be applied to the data. The implications of the findings for further intervention will be discussed and appropriate recommendations will then be made to the communities, government and other stakeholders.

Keywords: *nutrition, nutrition, cognitive development, early childhood, Nigeria*

The influence of biological and non-biological subjects in premises on children's deductive reasoning

TENG, J. (CYCU), TENG, W. C. (Chung Cheng University), LIN, W. Y. (Department of Psychology,

Chung Cheng University), LIN, H. T. (Chung Cheng University)

One of the major preoccupations of the theory of mental models is that human reasoning could be shaped by past experience. Human reasoning ability would be influenced not only by formats but also by contexts of conditionals. This research will investigate the influence of the subjects of conditionals biological or non-biological, on children's reasoning performance. The subjects are first graders in northern Taiwan. A group test was conducted. The results demonstrated that the correction rate of reasoning in conditions with biological subjects were significantly higher than those with non-biological ones in modus ponens. The results also suggested that children have better performance on conditional reasoning when they have more background knowledge relevant to the premise. In addition, a clear response set of the preference of "uncertain" choice was found. This reaction shows a significant discrepancy from most of the published studies. However, due to the fact that the relationship between antecedent and consequent in the conditionals with a biological subject is always real in experience while the relationship in the conditionals with non-biological subject is not, the results deserve further clarification. Therefore, the present research is of value in looking into young children's reasoning process.

Keywords: *child psychology, reasoning, past experience, children*

The influence of co-worker relationships on person-organisation misfit

COOPER-THOMAS, H. (University of Auckland)

This paper will explore the association between co-worker relationships and individual perceptions of person-organisation misfit. Person-organisation fit research has tended to focus on fit as a positive construct, and research to date has been primarily quantitative, investigating antecedents and consequences of fit. This literature has shown that social factors are positively associated with fit. Our research is novel in looking at misfit, and focuses on how interactions with co-workers influence individual

employees to the point where these employees feel that they are a misfit. While perceptions of misfit may be rarer than perceptions of fit, the implications of feeling that one does not belong may be more severe. The research comprises a literature review and qualitative data analyses. Our findings confirm that co-worker relationships are key influences on perceptions of person-organization misfit. Feelings of not belonging can be based on differences on socio-demographic and personality variables, but it is through communication between colleagues that these differences become actualised. The consequences of misfit are grave, and include severely reduced wellbeing. Employees who feel that they are misfits are prevented from contributing to their full potential, and the consequences are negative for these employees and for their employing organizations. Although misfit was perceived from interactions, the basis often seemed to be personality or demographic differences. Given the increasing diversity of workforces globally, misfit may be on the increase. Hence, there are ethical and practical imperatives for improving co-worker relations and hence reducing the likelihood that employees will feel like misfits.

Keywords: *co-worker relationships, person-organisation misfit, misfit, belonging, well-being*

The influence of performance feedback on task performance under pressure

YAMANAKA, S. (Nagoya University)

Task performance is often impaired when pressure to perform (e.g., competition, audience-induced pressure) is salient. This study investigated whether performance under pressure may be influenced by the perception of success or failure during the performance. It was hypothesized that subjective arousal evoked by the perception of failure during task performance would impair cognitive task performance, whereas the perception of success would not evoke subjective arousal and would not impair performance. A 2 (feedback: success/failure) by 3 (block: pre-block/post 1-block/post 2-block) design experiment was conducted on undergraduates. Participants performed a n-back task (a representative

working memory task) in front of the experimenter, who monitored their performance. Participants were told that each block comprised 24 trials and that their task performance in each block would be compared with that of other students. They were also told that they would get an extra incentive depending on their ranking. They received performance feedback of either progressive success or progressive failure after blocks 1 and 2. Subjective estimates of arousal for each block were also collected alongside performance measure, upon completion of task performance. The ANOVA revealed that the success group experienced low arousal and a low error rate in blocks 2 and 3. In contrast, the perception of failure resulted in higher error rates and arousal estimates in block 2. For block 1 (before feedback), there was no difference in the error rate between the success and failure groups. A correlation analysis revealed no correlation between the error rate and the performance anxiety assessed before the performance. These findings suggest that task performance under pressure may be influenced by the perception of failure or success during performance. The perception of failure evokes subjective arousal and impairs the cognitive task performance. Moreover, task performance was observed to be affected by the cognition of the situation. The social implications of this research are discussed.

Keywords: *performance appraisal, task performance, pressure to perform, failure, success*

The influence of self-focused attention on blushing in high-and low-blushing propensity individuals

KIM, K. (Chung-Ang University)

Although blushing is a common emotional response, most people consider blushing undesirable, and often try to stop or conceal it. Some individuals experience so much distress from blushing that they sometimes even develop a blushing phobia or social phobia because of it. According to a cognitive model of fear of blushing, belief to be blushing is assumed to give rise to negative and dysfunctional beliefs regarding the costs of blushing. The anticipation of these costs causes fear, and this fear of

blushing leads to increased self-focused attention. Finally, this increased self-focused attention leads to a quicker and more sensitive detection of small temperature differences (increase), thus leading to an enhanced or even exaggerated sensation of blushing. The purpose of the present study is to investigate the influence of self-focused attention in individuals with high- and low-blushing propensities using an in vivo approach. Participants will be screened using the Blushing Propensity Scale (BPS) and the Self-Focused Attention scale (SFA), and they will be divided into 4 groups: 1) high BPS – high SFA group; 2) high BPS – low SFA group; 3) low BPS – high SFA group; and 4) low BPS – low SFA group. Prior to the task, baseline levels of skin temperature will be assessed (baseline). Participants will then be asked to engage in a 5 minute conversation with two unknown confederates (social task). After the conversation task, participants will have a recovery period of 1.5 minutes (recovery). Blushing will be measured using a thermal imaging camera and a subjective questionnaire. [Study in progress] We predict that high BPS individuals will represent considerably higher levels of facial temperature in the high SFA groups compared to the low SFA groups, while low BPS individuals will show no significant differences across the two SFA groups. This is an empirical study to examine the influence of self-focused attention within the fear of blushing mechanism. The present findings may provide valuable information to assist in the development of possible treatment solutions to help individuals with a strong fear of blushing.

Keywords: *blushing, self-focused attention, blushing propensity scale, fear of blushing, emotional response*

The influence of self-related task and frame on risky decision making

DU, X. (Shandong Normal University), ZHAO, S. (Shandong Normal University)

Since the “framing effects” was presented by Kahneman and Tversky in 1979 as an important issue in risky decision making, many studies have confirmed its existence. However, there are also some studies which have not found this. Thus some researchers suggest that there are some

factors, such as individual traits and task context that affect framing effects. In this study, we examined whether, in risky decision making, self-related task affects framing effects. We used typical “Stock Problem” as the experimental material. The stock issue was described in the frame of positive and negative. Participants ($n=113$) rated the level they approved of two projects on a 6-point scale. The experiment was 2x2 between-subjects design. The independent variables were self-related task (self-related vs. non self-related) and frame (positive vs. negative). The data was analysed by 2x2 ANOVA. The results showed that the main effect of frame was significant ($p<0.05$). Participants responding to negatively framed options ($M=3.90$) made more risky decisions than participants responding to positively framed options ($M=3.40$) and the main effect of self-related task was significant ($p<0.05$). Participants responding to non self-related options ($M=3.88$) made more risky decisions than participants responding to self-related options ($M=3.42$). Two-way interaction effect between frame and self-related task was also significant ($p<0.05$). Further simple effect analysis showed that in the non self-related task, participants responding to negatively framed options ($M=4.38$) made more risky decisions than participants responding to positively framed options ($M=3.43$), and there was no difference in self-related task. The study concluded that self-related task influenced framing effects. We suggest that in the self-related task, people were using in-depth processing, so the framing effects disappeared.

Keywords: *self-related task, risky decision making, framing effect, frame, decision making*

The influence of the type of reasoning tasks on children’s performance

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The major purpose of the present study was to examine the influence of the type of reasoning tasks (oral, word cards and pictures) on children’s performance and try to clarify the hypothesis that memory had a effect on children’s performance from previous studies. We constructed two conditional sentences, each sentence contained 4 conditional formats (MP,

DA, AC, MT) and presented orally, word cards and pictures. The research design was a between-subject factorial design. Participants were 32 students in the first grade of elementary school (18 boys, 14 girls) and randomly assigned to three groups. The results showed that the influence of the type of reasoning tasks on children's performance were not significantly different. Word cards and pictures used do not promote children's performance by helping to remember. Children's performance of reasoning tasks showed that children have better reaction in DA and AC than the others, the pattern is not consistent with previous studies. In MP when the reasoning task was in word cards or pictures, the reactions were worse than the other, and the difference between oral and word cards were significant. Three of these findings worth summarizing: first, maybe the children's reasoning performance are not correlated with short memory ability. Second, over half the participants chose the "maybe" answer in all the conditional formats. An explanation for this is that they present a strong response set. Finally, there is small number of participants in this research; therefore we need to increase the number in the future. Future research should clarify the correlation with memory ability, reasoning ability and finding out that what made the difference on children's performance.

Keywords: *memory, performance, reasoning, performance*

The investigation of personality disorders within mental patients using temperament and character

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This study was carried out to investigate the relationship between seven personality dimensions and personality disorders among mental out-patients. A sample of 97 psychological outpatients (43 female and 54 male) were asked to complete the Temperament and Character Inventory and MCMI Inventories. Results showed low persistence and self-directedness within many of the personality disorders. Also, personality dimensions of TCI

can significantly predict 28 to 66 percent of personality disorder variance. The maximum and minimum amount of prediction was related to avoidant and sadistic personality disorders, respectively. Finally, the results of canonical correlation analysis indicated that avoidance, impulsivity, pessimism, and insensitivity are common properties among personality dimensions and personality disorders.

Keywords: *mental illness, personality disorder, personality*

The KYT's effect to safe culture of the hospital organization: Qualitative analysis to the cognition of administrative nurses

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This case study used a semi-structured interview survey to reveal the affect of the KYT, a form of risk prediction training, on the organization of culture. The KYT was the cognitive training for increasing risk sensitivity for the hospital workers. After the hospitals took KYT into their medical safety programs, the safe cultures were expected to be developed. Informants were five administrative nurses of hospital "A". They described the changes which they noticed after the KYT operation according to three levels: (1) the personal level, (2) the team level, and (3) the administration level. The KJ method was used for analysis. This survey obtained approval of the ethics committee in the Hospital "A". The informants reported the following changes in the Hospital: the conveyance, confirmation and explanation of nurses became more accurate; administrators were more aware about their responsibility to safety; attitudes of nurses in conferences became more active; information was more shared and the amount of communication increased in the teams; procedures of treatments were shown in clearer ways, like making a manual; and awareness of medical safety was enhanced in the hospital. It is suggested that the safety level of the hospital was improved in three levels: (1) behavior and consciousness in individuals; (2) habit and atmosphere of teams; and (3) system and norm in the organization. The KYT affected not only

individuals, but also the organization. This study suggests that the three layered model of the KYT is effective in developing a safe culture, which mutually affects individuals, teams and the whole organization.

Keywords: *risk prediction training, safety, KYT, hospitals, medical safety*

The leadership effectiveness of multiple leaders: How do they effectively guide their team?

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Whereas many groups have formal or appointed sub-leaders other than their formal leaders, researchers have focused on the effectiveness of a single leader with a few exceptions (Kouguchi et al., 2002; Mehra et al., 2006). We examined how leadership behavior by a leader (L) and sub-leader (SL) is effective for the group. Leadership behavior was measured using the framework of PM theory (Misumi, 1985), which measures a leader's degree of task-performance behavior (hereinafter called P) and group maintenance behavior (hereinafter called M). It has been proven that a high P and high M leadership style (i.e., PM style) is most effective. Our first hypothesis is that when leaders and sub-leaders have good relationships, complementary leadership style by the leader and sub-leader (i.e., P-L & M-SL, M-L & P-SL) will be equally effective as the perfect leadership style (i.e., PM-L & PM-SL). Our second hypothesis is that the complementary leadership style, especially the combination of M leader and P sub-leader, will be more effective than the opposite one. 209 nurses (140 women, 60 men, 9 no response) rated senior (L) and sub-senior nursing officers (SL), on points of PM leadership, social power, leadership effectiveness and others. As a result of ANOVA, complementary leadership style was seen to have a high effect on the reduction of leaders' mental and work burdens, and leadership effectiveness corresponded to perfect style rather than the same leadership style. In addition, the P-L & M-SL combination was rated as being higher in leadership effectiveness than the M-L & P-SL system. Our study showed the effectiveness of

complementary leadership style. However, contrary to Hypothesis 2, P-L & M-SL style was evaluated higher than M-L & P-SL. We put forth a number of possible explanations. The effective complementary style may be a result of the good relationship between the leader and sub-leader. Alternatively, the M sub-leader might have improved the relationship between the P leader and followers and raised general leadership effectiveness. Also, because leaders have high legitimate power over sub-leaders, followers may accept P type leadership and alter their own styles to suit the leader.

Keywords: *sub-leaders, leadership behaviour, task performance, group maintenance behavior, social*

The manpower profile and researchers' work motivation of government research projects in Taiwan

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The first aim of this research was to determine the manpower profile of government research projects by researchers' demographic characteristics in difference disciplines, and to analyze the potential manpower profile based on applying a databank and a survey. The second aim was to determine the hygiene factors and motivators of researchers committing to work. A databank analysis and a questionnaire survey were used in this study. Two databanks in the Taiwanese government were used, one is the high education manpower profile from the Ministry of Education, and the other is applying project dataset from the National Science Council. Eleven year, 1997~2008, data is included in the study. Researchers who work for university and research institutions made up the sample and 7,002 subjects were collected. The response rate was 43.40%. Motivations with 21 items were developed from the study based on interviews and literature, with measurement by five-points Likert scales. A paired T-test and descriptive statistics were used in the study. The results showed that despite the intention and actually doing research projects, male researchers are the major manpower. In processing projects, there are almost 4 times more males than

females; however, females are only one and half of males. Researchers who work in public universities are the major manpower of projects. We also found the hygiene factors and motivators of researchers are almost the same as reported in Hersberg's research. The hygiene factors are procedure and safe needs. The motivators are resources, social, self-esteem, and self-actualized needs. The only difference from Hersberg is that getting resources is one of the motivators of researchers when they decide to commit to research projects. Hygiene factors vary by age. Safety to the elder ones and simple procedure to the younger ones are not hygiene factors. No sex role effect was found in the project review system; however, there is intuition effect. Therefore, female researchers and researchers who work in private institutions are the big potential manpower for the Taiwanese government research projects. This study empirically tested and found the hygiene factors and motivators of researchers.

Keywords: *manpower profile, government research projects, motivation, hygiene factors, Taiwan*

The meaning of therapists' personality variables and their therapeutic style in constructing relation with schizophrenia patients

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The aim of this research was the evaluation of constructed therapeutic relations with schizophrenic patients dependent on therapists' personal attributes and working style. 30 psychiatrists and 150 patients took part in an examination. The patients were assessed using the Dual Questionnaire form of the Therapist – Patient Relation, judging approval, professionalism, uncertainty, dominance, rejecting in the psychiatrist attitude (M. Stark). The psychiatrists were assessed using the Therapeutic Style Questionnaire: instructional, expressive, engagement, attentional, operative (H. F. Alvarez). Personality variables were evaluated on the basis of: The Satisfaction with Life Scale (E. Diener); Courtauld Emotional Control Scale (M. Watson); Generalized Self-Efficacy Scale (R. Schwarzer); and the Life Orientation Test (M.F. Schieier). With a view of

establishing which variables were explaining the therapeutic relations in schizophrenia, a method of stepping multiple regression was used, in which explained variables were taken from variables describing the therapeutic relations in the Dual Questionnaire Form. Received results show that the variables explaining the attitude of the schizophrenic to the psychotherapist were: psychiatrist's approval, explained 13% of the variance through the following configuration of variables: quality of life of the psychiatrist, dealing with anger and the length of the cooperation. The psychiatrist's professionalism explained 21% of variances: his quality of life, attentional styles of the work and the length of the cooperation; the psychiatrist's uncertainty explained 16%: psychiatrist's quality of life and time of the cooperation. They explain the dominance of the psychiatrist in 12%: life orientation and the length of the cooperation. They explain rejection in 20%: psychiatrist's self-control over his anger, his quality of life, and time of the cooperation. Received results show that the factors explaining the attitude of the schizophrenics to the therapists, are the variables describing the personal dimension of the psychiatrists treating them. An important factor underlined in the majority of the analyses was a dimension of the length of the cooperation with the psychiatrist. This variable showed that the longer the patient was cooperating with one therapist a chance of creating the effective therapeutic relation was all the greater.

Keywords: *therapist-patient relation, schizophrenia, cooperation*

The measurement of harmful group activities as the member's abuses in cultic and terroristic groups

NISHIDA, K. (University of Shizuoka)

The Group Health Scale (GHS) was developed for measuring harmful group activities which subtly abuse the members physically and psychologically. The scale consists of four dimensions, which measure the group characteristics of totalistic group identity, deprivation of private life, sealing critics, and absolute compliance. They are confirmed

harmful activities on the base of democratic human rights by administrating some preliminary surveys on normative beliefs of group activities in Japan, Spain, and United States. Now, we checked out the degrees of some harmful group activities in Japan. Former members (N = 340) of a variety of social groups in Japan rated group activities which they experienced. Around half of the participants had belonged to some controversial groups and the remaining participants had not belonged to these kinds of groups. The questionnaire administered included not only the GHS, but also the items for rating their subjective abusive levels to their belonged groups. It was clearly shown that the mean score on the GHS for the participants who had not belonged to any controversial groups was low ($M = 65, SD = 24$), but the score for the participants who had belonged to the groups was quite high ($M = 185, SD = 40$) comparatively, and the latter's subjective evaluation of their abusive experiences were higher than the former. It was also shown by the analysis of the sub scales, that the former members of controversial groups rated higher scores on each of the four sub scales. It was suggested that some controversial group activities were harmful because they were very abusive psychologically, and because individuals were regarding their group activities as the only path of virtue, even though irrelevant people were troubled. It was also suggested that the unhealthy group had the characteristics of forcing totalistic identity, deprivation of private free life, sealing any criticism by the members as well as their irrelevant people, and requesting the member's absolute compliance to their authority.

Keywords: *harmful group activities, physical abuse, psychological abuse, Japan*

The moral, the majority, and the minority: The interplay of moral and descriptive norms in the context of volunteerism

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The present research had three focal aims: (a) To identify potential targets for interventions aimed at encouraging volunteer participation, (b)

extend the moral norm literature by experimentally manipulating a moral norm using priming techniques, and (c) provide greater insight into normative influence processes by determining whether conformity to descriptive norms depends on whether one has been primed with a moral norm. Prior to the main study, a pilot study demonstrated the construct and discriminant validity of a novel prime designed to activate a moral norm for volunteering. In the main study, 229 university students were randomly assigned to a moral norm prime or control condition (moral norm manipulation) and subsequently informed that either a majority or minority of university students volunteer (descriptive norm manipulation). Intentions to volunteer were then assessed. Priming participants with a moral norm for volunteering strengthened their intentions to volunteer. Moral and descriptive norms also interacted to influence volunteer intentions. Specifically, control participants had stronger intentions to volunteer when informed that a majority as opposed to a minority of university students volunteer. In contrast, primed participants' intentions to volunteer did not differ according to the prevalence of volunteering. This research provides evidence for the causal impact of moral and descriptive norms on intentions to volunteer. Evidence that moral norms moderate the relationship between descriptive norms and intentions to volunteer provides insight into the boundary conditions of normative influence and highlights the importance of considering the main and interactive effects of situational factors in the context of volunteerism. Findings also possess important applied implications as they suggest interventions aimed at encouraging volunteer participation could profit from targeting moral and descriptive norms.

Keywords: *volunteer participation, moral norms, volunteer intentions, descriptive norms, conformity*

The power of written emotional expression on psycho-physiological health

GARGYA, S. (Delhi University)

The present research examined the effect of written emotional expression on participant's psychological health—*affect* [Positive Affect (PA) and Negative Affect (NA)], and cognition [components of the Impact of Event Scale (IES) i.e. intrusions, hyper arousal and avoidance, narrative analysis] and physiological health [Heart-rate (HR), Blood-pressure (systolic SBP) and (diastolic DBP)], and physical health (symptoms, perceived and general health). Ten participants were randomly assigned to each of three conditions- Trauma Condition, Happy Condition and Neutral Condition ($n = 30$). Each participant wrote for three days consecutively, and a follow up was taken after two months. Pre and post measures of writing were taken on affect using the Positive and Negative Affect Schedule (PANAS), cognition via the Impact of Event Scale revised (IES), and narrative content. Physiological arousal was assessed by recording Heart Rate and Blood Pressure, while physical symptoms and health were assessed using the SMU- health Questionnaire. Findings revealed significant short term affect changes across all the three conditions. The happy condition induced a significant reduction in heart-rate, health problems and symptoms. The trauma condition induced an elevated heart rate, and reduced health problems. The neutral condition also showed significant improvements in health problems. Narratives in the trauma condition had greater usage of negative emotion words while narratives in the happy condition had more positive emotion words. These findings have been discussed in light of cognitive processing and confrontation – inhibition theory to understand the possible mechanism underlying health. All three conditions however showed significant improvements in long term symptoms and health problems. Hence, expressive writing does reap physical health benefits. Therefore it can be concluded that writing is an effective intervention to improve one's health.

Keywords: psychological health, positive affect, negative affect, physiological health, physical health

The prevalence of ADHD in primary school students in Tehran

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Attention Deficit Hyperactivity Disorder (ADHD) is characterized by a developmental disorder involving inappropriate poor attention span or age-inappropriate features of hyperactivity and impulsivity and/or both. In order to assess the prevalence of children with ADHD in Tehran, a sample of 2667 children including both males and females aged between 7 to 12 years were selected by a two-stage method sampling among a grid of sectors of 19 different educational areas by stratified random sampling. We tested the rate of ADHD in the considered children based on two questionnaires of Conners Parent and Teacher Rating Scales (CPRS and CTRS) and semi-structured interviews. According to the recent studies, it is possible to describe the rate of ADHD prevalence based on the CPRS and CTRS questionnaires and semistructured interviews among the primary school children in Tehran (aged between 7 to 12 years of age) within a range of 3% to 6%. These mentioned findings are somewhat similar to the announced statistics of the American Psychiatric Association (APA; 2003).

Keywords: Attention Deficit Hyperactivity Disorder, developmental disorders, inappropriate poor attention, hyperactivity, impulsivity

The processes of intercultural communication

NAKATA, S. (Sophia University)

The purpose of this study was to investigate the intercultural communication and development of self in childhood. Twenty four preschool children aged 3-5 years completed an interview, which was conducted individually using pictures and photographs. Pictures and photographs of daily life in Japan and the United States were used. The results showed the processes of cross-cultural awareness. When an infant saw the picture, the photograph, and the story, they infant understood the culture of Japan and the United States. After seeing the picture and the photograph, the infant who had seen a video concretely understood the message of the video.

We clarified that the method of the infants maintaining the interpersonal relationship was understood by eyes and expressions as: 1) cross-cultural experiences and understandings; 2) cross-cultural communication; 3) interactive activities for intercultural understanding; 4) expression in intercultural communication; 5) cross cultural training; 6) intercultural communication in the process of misunderstanding; 7) the processes of cross-cultural awareness and its effect on learning; and 8) cross-cultural understanding and communication.

Keywords: *intercultural communication, childhood, preschoolers, Japan, United States*

The projective method of the measurement for the fear of crime of children

HARADA, A. (Koshien Junior College), KAGEMURA, Y. (Koshien University)

The aim of this study is to measure fear and risk perception of crime of children by a projective and experimental method. The experiment for which 32 children, who were 10 and 11 years old, constructed a desirable town to live in was submitted. On the sheet that a virtual town area including their home was printed, the participants arranged the cards that the elements of a town were painted, for example, school, house, hospital, parking, bank and so on. After the construction was finished, they were asked where they got the fear and risk perception of crime. The following figure shows the sample of the result of a virtual town. The result suggested the relation between a position of home and a location of the fear and risk perception of crime. It was suggested that what children said was strongly led by influences of teachers or parents. This method is effective for children. It is difficult to ask children if they feel the fear of crime directly. The measurement of this study uses an indirect method and the psychological burden for children is small.

Keywords: *fear of crime, children, risk perception*

The proposal of commissioner(a) from family school – C.F.E.: A strategy for

conflict resolution and the construction of democratic practices from a Latin American perspective

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The paper presents the experience of a working diagnostic and research done on building the proposal of Commissioner(a) of Family School – C. F. E. Educational Institution Paulo VI Palmira Municipality, Department of Valle del Cauca, Colombia, South America. This paper sets out the seven key elements for the underlying, legal, pedagogic, didactic, recreational and strategies for the construction of knowledge; partner-community; inter institutional; foundations for the construction of democratic practices and elements from the projection of Public Policies. The strategy of C.F.E, in the pedagogical context which also integrates various aspects, must be understood as a mechanism of initiating conflict mediation and the construction of democratic practices. Now, in such educational institution, i.e. The Commissioners of Family School students from the first grade to the eleventh grade, who through a mechanism of choice are elected to support the process of reporting, processing and mediation of conflicts occurred in the school, based on the situations dealt with in the table: Minor Conflicts and Major Conflict. The paper proposes a discussion for conflict resolution strategies developed in Latin American countries: Colombia, México, Venezuela, Peru, Chile and Argentina. It is based on a working methodology and qualitative research through observation, focus groups, group work, case studies and workshops of imagery and representations among others. The research results show the verification and construction of strategies for conflict resolution and prevention of situations that violate the rights in children and adolescents in educational institutions.

Keywords: *conflict resolution, democracy, Latin American, educational institutions*

The pros and cons of avoidance goals: How neuroticism influences the effects of avoidance goals on performance, flow and well-being

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Previous research has shown that avoidance goals are associated with several negative outcomes. We hypothesized that avoidance goals can also have positive effects under certain circumstances. We assumed that individuals high in neuroticism benefit from avoidance goals in the short term, whereas they suffer from such goals in the long-run. Three studies investigated whether neuroticism moderates the effect of avoidance goals on performance, flow and well-being. In study 1 (N = 30), an experimental study in the lab, employees were randomly assigned to an approach or avoidance goal group while working on an in-basket exercise. Study 2 (N = 283) examined the students' academic approach and avoidance goals during a semester. In study 3 (N = 102) we gathered experimental as well as cross-sectional data. On the one hand students were randomly assigned to an approach or avoidance goal instruction while writing a creative story in the classroom (study 3a). On the other hand we measured students' dispositional goal orientation at school (study 3b). We also assessed neuroticism in all of the studies. The results of the experimental studies showed that the interaction between neuroticism and experimental manipulation significantly predicts the performance in the in-basket exercise (study 1) as well as the flow-experience when writing a creative story (study 3a). Participants high in neuroticism performed better and experienced more flow when receiving an avoidance goal instruction. Individuals low in neuroticism however benefited more from an approach goal instruction. As expected, the results of the longitudinal and cross-sectional studies (study 2 and 3b) showed that participants high in neuroticism who pursued a lot of avoidance goals or with a dispositional avoidance goal orientation reported the lowest well-being and

dispositional flow-experience at school. These findings extend previous research by demonstrating that neuroticism moderates the effects of avoidance goals on positive outcomes. Implications for theoretical and practical concerns are discussed.

Keywords: *avoidance goals, neuroticism, performance, flow, well-being*

The prostitution and commercial sexual exploitation of children and adolescents: A clear path for trafficking in persons, from Latin American routes

VIAFARA SANDOVAL, H. (Foundation for the Improvement of the Management and Education for Democracy (FUNDAGEPAD))

There is an increasingly close relationship between prostitution and the commercial sexual exploitation of children and adolescents. This practice clearly links previous and established links with the population minority – in both cases men and women, who are becoming more explicit. From the findings it can be said that we are currently witnessing a market of the body, inscribed in practices that are by no means fixed, namely, in places set for this. The status of place here changes since so-called prostitution that is located to the subject or subject vendor of service in a particular place – street, reserved, bar, choreography, etc. Today it is made mobile, i.e., the place is not the most important, but the people offering the service (prostitute, fufurúfa, prepayment, man) are subject not static, because the offer easily agency from a classified but runs in another space, or are advertised on the web and materialize anywhere from one country or outside it. The "territories" for the trade of the body have suffered mutations. Now, the recognition of the activity – from the tracks and findings – allow daring to rise such that here is configured a kind of industry or company that is well organized, which also makes use of technological resources such as in any other organization. This paper proposes a reflection that commits empirical findings of several Latin American nations: Colombia, Mexico, Venezuela, Peru, Chile, Argentina and Brazil. A qualitative research methodology through observation, interviews, and focus

groups, in addition to queries using newspaper classifieds and websites, etc, is used.

Keywords: *prostitution, sexual exploitation, children, people trafficking, Latin American*

The psychological impact of deployment in a clinical sample of Australian military

CAMPBELL, J. (James Cook University), JACKSON, T. (James Cook University)

A large number of studies have shown psychological effects in military personnel serving on deployments. This study evaluated differences in symptom acuity between Australian Defence Force (ADF) personnel who had been deployed compared to non-deployed; and those on warlike missions compared to peacekeeping missions. Exposure to life threatening combat as an independent predictor of psychological disorder, and the influence of incongruent Rules of Engagement on outcomes was assessed. A clinical database of 1600 current and former ADF personnel, serving post-Vietnam War, was analysed. Participants had completed self report measures of depression, anxiety, stress and alcohol use upon initial presentation at a local counselling agency. The participants were categorised into one of two exclusive groups, either Deployed or Non-deployed. The Deployed participants were further classified into warlike or peacekeeping mission types. Further, cases were selected on the basis of their deployment to specific zones of conflict where Rules of Engagement (ROE) were either congruent or incongruent. The Specific Conflicts chosen were Iraq/Afghanistan, representing congruent warlike deployments, the Solomons/Bougainville representing congruent peacekeeping, and Somalia/Rwanda representing incongruent peacekeeping. Analysis indicated that there were no effects for deployment by itself on depression, anxiety or alcohol use, but where combat was experienced, stress levels were higher. Peacekeepers reported more anxiety than those on warlike deployments. Where there was incongruence between Rules of Engagement and deployment experiences higher levels of anxiety and stress were reported. Peacekeepers on missions with congruent ROE had less risky alcohol use than those on congruent warlike or incongruent

peacekeeping missions. The finding that peacekeeping is as disturbing as warlike deployments and that incongruent Rules of Engagement influence psychological outcomes has implications regarding recruitment, training and deployment preparation for ADF personnel.

Keywords: *military deployment, Australian Defence Force, psychological impact, rules of engagement, peacekeeping*

The psychology of teaching netball and cricket to persons with an intellectual disability

YOUNG, J. (Victoria University), BROWNE, A. (Victoria University)

This presentation reviews a netball and cricket program for persons with an intellectual disability and, in doing so, highlights key principles associated with successfully coaching this special population of athlete. Twenty (12 female and 8 male) Victoria University First Year Education students delivered a 12-week series of sessions to 26 persons (8 female and 18 male aged 16 – 26 years) with an intellectual disability (predominantly persons with autism and downs syndrome). The first 6 weeks of the sessions focused on netball and the second half on cricket. At the completion of the two blocks of sessions, Victoria University students were asked to evaluate their experiences. A series of inductive content analyses was conducted to analyse the data. The data analyses revealed a range of factors associated with successful coaching including: (a) focus on an athlete's abilities; (b) adapt to ensure inclusive for all; (c) take an individual approach to plan a fun, challenging and safe lesson and (e) attend to one's communication skills (e.g., provide lots of visual demonstrations and embrace infectious smiles, positive encouragement and feedback). In further findings, coaching cricket was found to be more challenging than coaching netball in that the former required additional modifications to keep athletes involved and engaged at all times. The program's findings are consistent with general coaching principles (e.g., Martens, 2004). As such, the program's findings re-enforce the notion that 'coaching is coaching' - irrespective of the targeted group, key principles relating to of the importance of

communication skills and focusing on the athlete's abilities to provide a fun, safe and challenging learning environment are paramount. Further, the opportunity exists for a most positive, inspirational and insightful experience for coaches who work with targeted special populations such as persons with an intellectual disability.

Keywords: *coaching, intellectual disability, communication, athletic ability*

The relationship between attachment to God, religiosity, happiness, compassion, psychological health and wellbeing amongst Australian Muslims

DOVER, H. (University of Western Sydney)

The impact of religion and spirituality on psychological health and wellbeing of Muslims has been, in general, under-researched. The preliminary study aimed to explore the relationship of Attachment to God, religiosity and religious reflection, on happiness, compassion and psychological health amongst Muslims living in Australia. 125 Australian Muslims from around Australia were recruited from various Muslim organisations after advertising for volunteers to participate via Muslim e-mailing lists and Muslim community events. Emerging results from questionnaires distributed across Australia show that that Attachment to God, religiosity and religious reflection are strongly correlated with psychological health, happiness, and compassion. These findings have implications of the positive effects of attachment to God and religiosity, on overall psychological wellbeing and happiness amongst Australian Muslims.

Keywords: *religion, Australia, psychological health, well-being, Muslims*

The relationship between college students' achievement goals and evaluations of teachers

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Teaching evaluation provides feedback to teachers. Previous research has focused on teachers' profession and teaching strategies, while ignoring the role of students' learning goals. It is inferred that the relationship between teachers' characteristics and teaching evaluations vary with students' achievement goals. Participants were college students in Northern Taiwan. A self-report inventory was used to measure students' achievement goals and their evaluation of teachers. Participants were asked to rate one teacher of a compulsory course in teaching skills, academic demand, knowledge acquisition, and performance criterion. Learning goals were divided into learning vs. performance goals. This study showed that students who pursued performance goals prefer teachers with lenient performance criterion and low academic demand, but students with learning goals tended to like teachers having good teaching skills and being helpful in knowledge acquisition. Students' evaluations of teachers were influenced by teachers' characteristics and their own achievement goals. Therefore, poor teaching skills would not always lead to low teaching evaluation. The fit between students and teachers is the crucial determinant of teachers' evaluations.

Keywords: *teaching, students, evaluation, feedback, learning goals*

The relationship between college students' negative self-thinking, self-esteem and mental health in Chinese's culture

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Using experimental and test methods, we selected 201 college students (101 male, 100 female) to complete the Implicit Association Test, the Self-Esteem Scale, the Habit Index of Negative Self-Thinking, the Automatic Thoughts Questionnaire and SCL-90. We explored the relationship between college students' negative self-thinking, self-esteem and mental health in Chinese culture. The results showed that there is a significantly positive correlation between habitual negative self-thinking and cognitive

content negative self-thinking, and habitual negative self-thinking and cognitive content negative self-thinking have a more significant gender difference in males than females. It was found that students have a strong implicit self-esteem, and implicit self-esteem and explicit self-esteem are relatively independent, with no significant gender differences, and male mental health has a more significant gender difference in females than males. Also, habitual negative self-thinking and cognitive content negative self-thinking, respectively correlated statistically significantly with explicit self-esteem, but were not correlated with implicit self-esteem; habitual negative self-thinking contributed to the prediction of self-esteem was statistically significant. Habitual negative self-thinking and cognitive content negative self-thinking contributed to mental health and were both statistically significant; habitual negative self-thinking accounts for variance in mental health over and above cognitive content negative self-thinking. Furthermore, males' explicit self-esteem correlated statistically significantly with mental health, whereas females were not significant; the correlations between implicit self-esteem and mental health were not significant. The effect of negative self-thinking on mental health is not mediated by explicit self-esteem.

Keywords: *Chinese culture, negative self-thinking habit, self-esteem, mental health, gender*

The relationship between driving workload and drivers' human factor

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Excessive workload has mainly been referred to as the state such that an operator cannot perform a task any further due to a lack of resources. As drivers are also operators who perform tasks, drivers could be affected by excessive workload. We are concerned that excessive workload could affect the drivers' resources that are needed for driving; hence there exists the possibility that excessive workload could cause a serious traffic accident. Therefore, we examined which human factors are related to drivers' subjective workload, by

means of the following instruments: Driving Behavior Determinants, Driving Confidence Level Questionnaire, and "NASA-TLX." The participants were 215 drivers (159 males, 53 females) with an average age of 33 and average driving experience of 8 years, who responded to all three questionnaires. The Driving Behavior Determinants and the Driving Confidence Level Questionnaire are widely regarded as appropriate tools for determining drivers' characteristics. Furthermore, several studies have verified that these tools measure the factors that affect driving behaviors such as speeding. The NASA-TLX is known as a self-assessment tool for measuring subjective workload. We performed a correlation analysis on the results of the Driving Behavior Determinants and Driving Confidence Level Questionnaire, and the drivers' subjective workload level, as assessed by the NASA-TLX. The correlation analysis revealed that "Lack of Interpersonal Adaptability" ($r = .219, p < .01$), "Situational Anxiety" ($r = .248, p < .01$), and "Insensibility" ($r = .364, p < .01$) showed significant correlations with high levels of the driver's subjective workload. "Unsafe Driving" did not show any significant relationship to high workload, but it suggested a tendency toward correlation ($r = .135, p < .05$). This study aimed to provide a theoretical understanding of driving workload and discovered that some human factors relate to workload. It is suggested that these results could assist drivers and researchers to develop ways to better manage driving workload.

Keywords: *driving workload, driving, human factors, driving confidence, excessive workload*

The relationship between emotional intelligence and depression and adjustment in light of gender variables among Sultan Qaboos university students

SULAIMAN, S. (Sultan Qaboos University)

This study aimed to investigate the relationship between emotional intelligence and depression and adjustment in light of gender variables among Sultan Qaboos university students. A sample of 323 students answered questions on emotional intelligence, Beck depression

inventory and adjustment scales. A t-test was used to discover the differences between males and females on emotional intelligence means (high, low), and upon means of depression and adjustment. Results show that the mean of emotional intelligence of all students of the sample was in the high level, and there was also a significant effect for gender on the level of emotional intelligence in favor of females. Results show a negative relationship between emotional intelligence and depression, while on the other hand there is a positive relationship between emotional intelligence and adjustment. Results also reveal a significant effect in means of depression symptoms due to the level of emotional intelligence for males and females in favor of those who have low levels of emotional intelligence. On the same track, results show a significant effect in means of adjustment due to the level of emotional intelligence for males and females in favor of those who have high levels of emotional intelligence.

Keywords: *emotional intelligence, depression, adjustment, gender variables, university students*

The relationship between learning strategies, study difficulty and help-seeking needs in college students

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In this study, we construct a structural questionnaire, to survey that which learning strategies are more correlated with undergraduates' satisfactory about their study. And we also investigate which factors are correlated with their interest in getting help from counseling. 3,032 undergraduates completed a survey including Learning Strategies Scale, Study Difficult Scale, and a self-rating question (with Likert's 5 point scale) about their satisfaction of their study. They also answered how they had resolved their study difficult before, and their interest in attending counseling activities in the future. There are 21 departments, which belong to seven colleges, including education, science, arts, technology and vocational education, management, social science and physical education, and engineering.

The results indicate learning strategies, study difficulty, study satisfaction, help-seeking behaviors (before), and the need of counseling activities have high significant correlation. The more help-seeking behaviors they had used before, the more satisfaction they feel about their academic performance now ($r=.135$, $p<.001$), they also feel lower level of study difficult ($r= -.261$, $p<.001$), higher usage of learning strategies ($r=.497$, $p<.001$), and less need to get help ($r= -.049$, $p<.05$). T-test, ANOVA, regression, and path analysis also had interesting finding. To improve college students' academic performance and to give the sufficient counseling resources, learning strategies and help-seeking behaviors are very important factors. Research results are discussed and given suggestions in the background of education and counseling.

Keywords: *satisfaction, undergraduate students, help-seeking, study, academic performance*

The relationship between national and psychological identity and psychological well-being among Shahed and non-Shahed students

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The aim of the present study was to investigate the relationship between different aspects of identity (religion, national and psychological) and psychological well-being among Shahed (the group of students who have lost their father in war) and non-Shahed (group of students with a living father) students. The statistical universe consisted of the students of Tehran universities with a sample of 1000 cases (500 Shahed and 500 non-Shahed) who were selected by stratified random sampling. Psychological well-being scale, religious and national identity scale, and revised identity style questionnaires were used as the research devices. The data were analyzed by correlation and Fisher Z. The results of the study indicated that there is a significant positive correlation between psychological well-being sub-scales and religious and national identity, except that the relationship between strict religious identity and happiness and optimistic sub-scales. Information identity style, normative identity style and commitment have

positive correlation with psychological well-being sub-scales; this is while the diffuse/avoidant identity style showed a negative correlation with all the psychological well-being sub-scales. The relationship between religious identity and psychological well-being was not significant in Shahed and non-Shahed groups. In the non-Shahed group the relationship between Iranian patriotic identity and positive relations with others were stronger than for the Shahed group; the difference between Shahed and non-Shahed groups was significant only in the relationship between information style and life satisfaction. Attention to religious factors can be helpful and useful to increase psychological well-being, and psychological and national identity of students.

Keywords: psychological identity, national identity, religious identity, psychological well-being, shahed students

The relationship between organizational climate and occupational health

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This study aims to investigate the relationship between organizational climate in a company's Information Technology's Structure, and health indicators of the workforce. To collect the data, we used a modified version of the Assessment of Organizational Climate by Moos (1986), composed of 90 items, that has been applied and validated in Brazil by Günther and Puente-Palacios (1993) which aims to evaluate the dimensions of personal relationship with subscales of involvement, cohesion and support, personal development with subscales of autonomy, orientation, size, pressure maintenance and change, and with subscales of clarity, control and comfort. The second instrument was the fourth scale Inventory of Work and Risk of disease - ITRA, composed of 29 items dealing with social pathologies associated with the organization of work, health and the risk of disease, developed and validated by Mendes (2007). The instruments were administered in two sessions with an interval of one week each, in a sample of 123 professionals working in the company. The participants'

responses were coded and data processed electronically using the BioEstat 5.0. The Moos Inventory revealed that the results were moderate when analyzing personal relationship dimensions, personal development, maintenance and changes that employees identify themselves moderately with the institution. The data obtained from the ITRA showed satisfactory aspects to physical and social health and moderate psychological health. The relationship between the results of the surveys by Moos and the ITRA showed that thirteen items were significantly correlated to one or more dimensions of social climate in organizations, indicating the need to evaluate in greater depth issues that can influence the organizational climate and health of the worker. In conclusion, the results presented are related to the perceptions of people regarding their work environment, and how they feel in the organization. Management strategies to improve quality of work life can be developed in the company, to evaluate these issues and act on them. This leads to consideration of the importance of establishing changes in the climate of the organization, particularly in aspects that have been shown to correlate with health, which can be extended to physical and social components.

Keywords: organisational climate, health, quality of work life

The relationship between personality traits and depression among active and non-active elderly females of Tehran

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The purpose of this study was to examine the relationship between personality traits and depression among active and non-active elderly females of Tehran. Subjects consisted of 188 elderly females (94 actives and 94 non-actives) between the ages of 63-82 years, who were selected from an available population in the city of Tehran. Three instruments were used including: 1) demographic questionnaire, 2) Beck depression questionnaire and 3) NEO personality traits questionnaire. Data were collected and analyzed using descriptive statistics and

inferential statistics such as mean, standard deviation, Pearson correlation coefficient and Enter multi variant regression. Findings revealed there is a significant correlation between personality traits of neuroticism, extroversion, openness and conscientiousness with depression in active subjects, and openness and conscientiousness with depression in non-active ones. Findings also showed that there is a linear relationship with openness and extroversion variants in the active population and conscientiousness variants in non-active subjects. On the bases of these findings, being physically active can improve positive personality traits such as extroversion and openness and decrease depression in elderly females of Tehran. In addition, we can predict depression changes from the amount of physical activity and personality traits in the population under study.

Keywords: *personality traits, depression, elderly people*

The relationship between positive moods, personal resources and mental health

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Fredrickson's (1998, 2001) broaden-and-build theory of positive emotion holds that people's daily experiences of positive moods compound over time to build a variety of consequential personal resources. To date, prospective correlational studies have shown that people who experience or express positive moods more than others show increases over time in optimism and tranquility (Fredrickson, Tugade, Waugh, & Larkin, 2003), ego-resilience (Cohn, Fredrickson, Brown, Mikels, & Conway, 2008), mental health (Stein, Folkman, Trabasso, & Richards, 1997), and the quality of their close relationships (Gable, Gonzaga, & Strachman, 2006; Waugh & Fredrickson, 2006). However few studies explored the relationship between positive moods, personal resources, and mental health. This study extends previous research by proposing and testing a model that examines the relationship between positive moods, personal resources, and mental health. We hypothesized that positive moods increase mental health by

improving personal resources, namely, ego-resilience, interpersonal trust, and coping style. Positive and Negative Affect Schedule (PANAS; Watson et al., 1988), The Ego-Resilience Scale (J. Block & Kremen, 1996), Trust Inventory, Coping Style Inventory, and SCL-90 scale were administered to 667 undergraduates. There were 311 males, and 356 females. Mean Age was 20.3 years. The result of this study indicated that positive moods correlated with personal resources (ego-resilience, interpersonal trust, and coping style) positively, and positive moods, personal resources correlated with score SCL-90 negatively. The path analysis (SEM) showed that positive moods predicted mental health directly; the path coefficient of positive moods to mental health was significant. Positive moods predicted ego-resilience, interpersonal trust, and coping style directly; the path coefficient of positive moods to the ego-resilience, interpersonal trust, and coping style were significant. Ego-resilience, interpersonal trust, and coping style predicted mental health directly; the path coefficient of ego-resilience, interpersonal trust, and coping style to mental health was significant. The results suggested that positive moods influenced mental health directly, and positive moods influenced mental health indirectly through ego-resilience, interpersonal trust, and coping style processes.

Keywords: *positive emotion, optimism, tranquility, quality of close relationships, personal resources*

The relationship between resilience and work motivation of Japanese nursery teachers

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The topics of resilience and motivation have been usually investigated separately, the first in the area of health psychology, and the second in the area of learning psychology. Consequently, the relationship between them is not well-known. The purpose of this study was to examine their relationship by using a population of Japanese nursery teachers. Two analytical scales were used. The resilience scale (Mori and others, 2007), which we had devised previously for university students, contained 4 factors : (1) an 'I Am' factor, which examined self-

understanding or self-esteem; (2) an 'I Have' factor, which examined social support from others; (3) an 'I Can' factor, which examined the reliability of one's own capacity or ability; and (4) an 'I Will / I Do' factor, which examined future, or present, customary behaviour. The work motivation scale was derived from Farnet and others (2008) and revised for Japanese nursery teachers. It examined 5 types of motivation for 6 work tasks. The motivation types were based on self-determination theory (Deci and Ryan, 1985, 2002; Ryan and Deci, 2000) and were: (1) intrinsic motivation; (2) identified regulation; (3) introjected regulation; (4) external regulation; and (5) motivation. The work tasks, derived from Japanese guidelines for nursery teaching, were: (1) Planning nursery teaching and care; (2) Interacting directly with children; (3) Describing the work log or children's personal records; (4) Management of the whole centre (ex., clearance, cleaning, or safety check); (5) Evaluating nursery teaching and care; and (6) Adapting to parents. The questionnaire was answered by 3325 Japanese nursery teachers. The more resilient teachers had a significantly higher motivation than other teachers. But this significance did not occur with external regulation of the 'I Have' and 'I Can' factors for some work tasks, or with external regulation of the 'I Am' and 'I Will' factors for the other work tasks. The relationship between work motivation and resilience depends on the factors of resilience, type of motivation, and work tasks.

Keywords: *resilience, motivation, work task, nursery teachers, Japan*

The relationship between self-consciousness goal focus, match-efficacy and choking of collegiate basketball players

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The term "choking" is used to describe athletes' performance decrease under pressure. The psychological mechanism and influencing factors of choking are one of the hot topics in sport psychology. This research was conducted to study the relationship between self-consciousness goal focus match-efficacy and choking. Forty collegiate basketball players

participated in this 8-week study, which employed a longitudinal design under no, low and high pressure. The subjects were measured for their level of self-consciousness goal focus and match-efficacy in the second week. The previous research has testified to the reliability and validity of these scales. The results showed that the choking index is highly positively related to self-consciousness, gently and positively related to goal focus, and gently and negatively related to match-efficacy. However, regression analysis showed that only public self-consciousness and private self-consciousness could predict the level of choking, and they could completely explain 61.5% of the variance of the choking index. Both the private-consciousness and the public consciousness were effective predictors of choking index. Choking was related to self-consciousness goal focus and match efficacy.

Keywords: *sport psychology, match-efficacy, goal focus, choking, athletes*

The relationship between time management disposition and self-monitoring of Chinese middle school students

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This research attempted to reveal the relationship between time management disposition and self-monitoring of Chinese adolescents. Three hundred and thirty one Chinese middle school students (166 junior students, 165 senior students) were selected, and asked to fill in a Self-Monitoring Scale (Snyder, 1974) and Adolescence Time Management Disposition Scale (ATMDS, Huang & Zhang, 2001). ATMDS consist of three subscales: the sense of time value, the sense of time control and the sense of time efficacy. Subjects were divided into two groups, high self-monitoring group (H group) and low self-monitoring group (L group). The results show that significant differences exist between the H group and L group on sense of time value and sense of time control, and H group are higher than L group, $F(1,329) = 6.88, p < .01$, $F(1,329) = 15.57, p < .001$. On sense of time efficacy, H group tend to be higher than L group, $F(1,329) =$

3.26, $p = 0.07$. No significant differences were found between male and female students on all three subscales, but significant differences existed between junior and senior students. The scores of junior students were higher than senior students on sense of time value, $F(1,329) = 4.227$, $p < .05$; $F(1,329) = 5.802$, $p < .05$; $F(1,329) = 9.472$, $p < .01$. The conclusions drawn from this study are that significant differences on time management disposition are found between different levels of self-monitoring, and significant differences exist between junior and senior school students on all three subscales. There were also no significant differences between male and female middle school students.

Keywords: *time management, self-monitoring, adolescents, Chinese students*

The relationship of gender role with mental health and it's components in employed women

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In the present study, the relationship of gender role (masculinity and femininity) and mental health was investigated in employed women. To serve this purpose, a sample consisting of 500 employed women in administrations, organizations and administrative companies of Tehran city were selected randomly. All subjects answered to all items of Goldberg's (1972) General Health Questionnaire (GHO) and Bem's (1981) sex role inventory (short form). To analyze data statistically, Pearson's correlation coefficient and multivariate regression were used. The results of the research indicated that femininity and masculinity have a positive correlation with each other. Femininity has also negative correlations with mental health, anxiety, dysfunction and depression; but has no correlation with somatic signs. Masculinity has negative correlation with mental health and dysfunction; and has no correlation with somatic signs, anxiety and depression. In addition, the results of regression analysis showed that masculinity has no significant role in explanation of mental health and its components. The results

of this research showed that employed women are high in bout of gender role (masculinity-femininity), also, more study and research must be done regarding gender role in Iran.

Keywords: *gender roles, mental health, employed women*

The relationship of job involvement with promotion opportunity, supervisor satisfaction, participation in decision making and internal motivation

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Job involvement and its benefits are prompted by a rise from both personality and individuals characteristics and organizational context, job design and supervisor's behavior. The purpose of this research is investigations of the relationship of job involvement with some of these predictor variables such as promotion opportunity, supervisor satisfaction, participation in decision making and employee's internal motivation. The research hypothesis is defined as a signification relation between job attachment and these four variables. In order to obtaining research purposes, 272 men and 4700 of women satisfaction universe selected form public organization by simple random sampling. Subjects respond to Kanungo's job involvement questionnaire (1982), promotion opportunity scale (Balfour & Wechsler, 1996), supervisor satisfaction scale (Smith, Kendal & Hulin, 1969), participation in decision making scale (Balfour & Wechsler, 1996), and internal motivation (Balfour & Wechsler, 1996). Data was analyzed using stepwise regression analyses. Regression analysis's proposed just one model that includes participation in decision making. This model is significant ($p < 0.05$) and indicates that participation in decision making and job attachment has 0/038 percent common variance. Although pervious research indicated that a combination of personality factors (locus of control, achievement need, internal motivation) and organizational factors (supervisory style, organizational climate,

compensational trend) influence job involvement, the current study's findings were not consistent with previous research. This issue implies that effective factors in job involvement according to organizational context and cultural context can be very different.

Keywords: *job attachment, promotion, supervisor satisfaction, decision making, internal motivation*

The relationships among parents' autonomous motivation, motivational supports, and children's autonomous motivation

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The purpose of this study was to examine relationships among the mother's and the father's autonomous motivation, motivational supports, and the child's autonomous motivation. Four motivational support variables—autonomy support, involvement, academic support, and warmth—were hypothesized to mediate between parents' and children's autonomous motivation. In addition, this research explored whether there were some differences between the mother's and the father's models. Japanese university students ($N=284$) in grade 1 through to grade 4 (i.e. from 18 to 22 years old) completed questionnaires regarding their parents and themselves in high school. The autonomous motivation scale was based on the Self-Determination Theory (SDT). Four subscale scores of autonomous motivation were combined to form a relative autonomy index (RAI). These subscales were external, introjected, identified, and intrinsic. Simplex structures were confirmed by correlation analyses. The item formats of autonomy support, involvement and warmth are similar to those of Robbins (1994) and Sakurai (2003). The academic support scale assessed parents' promotion of self-regulated learning (Zimmerman & Schunk, 2001). Structural equation modeling indicated that parents' autonomous motivations were positively associated with warmth, autonomy support, and academic support. The warmth was positively related to autonomy support, involvement, and academic support. Furthermore, there were significant paths to children's motivation from

autonomy support. On the other hand, relations between parents' involvement and academic support, and children's autonomous motivation were not significant. Direct paths from parents' autonomous motivations to children's motivation were significant. The results of both the mother's and the father's models were almost the same. To conclude, in the previous research, there were relatively few studies that examined precisely the mediated processes between parents' and children's autonomous motivation. The present study suggests that the parents' warmth is the most important mediating factor in both mother's and father's models. When parents with warmth are academic and autonomous, supportive and involved, their children are most likely to internalize the regulation of their learning. In future research, it will be necessary to examine how parents support children and how the children become autonomous in a longitudinal study from childhood through adolescence.

Keywords: *motivation, autonomy, mothers, fathers, children*

The relationships between cultural-self concepts and the different types of implicit preference

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Recently, the cultural-self concepts have needed re-thinking and are discussed here in a new perspective. The present study investigated the relationships between cultural-self concepts and two types of implicit self-esteem. The implicit preferences of Japanese university students were measured by the Go/No-go Association Task (GNAT) technique, which is one of the derivative types of the Implicit Association Test (IAT). Seventy-six Japanese university students (32 males and 44 females) participated in both GNAT tasks and explicit self-rating questionnaires on cultural-self concepts and self-esteem. Participants took both the Self versus Best Friend GNAT task, and the Self versus general Other GNAT task so that two kinds of implicit self-esteem, Self-Best Friend GNAT effect (implicit preference for Self over Best Friend) and Self-general Other GNAT effect (implicit preference for Self over general Other)

were calculated. Statistical analyses were performed to determine whether some types of cultural-self concepts and explicit self-esteem can be predictive of this difference score of GNAT effects. The regression analysis for all participants showed no significant predictor. On the other hand, in the respective analyses for male and female participants, only the collectivism scale was a significant predictor among some self-related scales for males. The results showed that for Japanese the function of the collectivism is different for males and females. There is a three-way interactional relationship among implicit self-esteem discrepancy for Best Friend and general Other as the Other category, the collectivism that has been considered as a distinctive property in Japanese culture, and the gender differences.

Keywords: *cultural-self concepts, implicit preference, self-esteem, collectivism, Japan*

The repeating natural disaster and PTSD of survivors

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OMORI, T.

The research of repeating disaster survivors' mental health has been done little in Japan. The exception is Tetsushi Omori's survey on the mental health of Tsubota district's residents after the eruption of Miyake-island in Tokyo (in print). The eruption at Miyake-island in July, 2000 was a volcanological rarity, and it has been emitting volcanic gas in a wide area of the island. The repeated emissions of volcanic gas have been covering a large area of the island, even after 9 years following the eruption, and it exceeds the safety and environmental standards in many parts of the island. According to the Omori's research, survivor's mental health of repeating disaster after 7 years, using GHQ28; an abbreviated version of GHQ (General Health Questionnaire) 28, 63.6% of the disaster survivors were found to be in the high risk category. The research clearly shows the influence of the repeating disaster on the survivors' mental health. GHQ has been used for research relating to natural disasters; for example, Ohta et al.'s (1995) research of the volcanic eruption of Mt. Unzen, Fujimori and Fujimori's (1995) research of the Hokkaido

Nanseioki Earthquake, and Tanaka and Takagi's (1997) research of the Hanshin-Awaji Great Earthquake. Each research assessed the mental health of non-recurring disaster's survivors using GHQ. The mental health of Miyake-island's residents, who live under the stress of repeating disaster, needs to be examined, focusing on post traumatic stress disorder (PTSD) as well. This research updates and further examines the Miyake-island's residents' mental health following Omori's research in 2007. The study was performed from September 2nd to October 2nd, 2009. We surveyed the residents of Tsubota district of Miyake village in Tokyo over the age of 20 who had witnessed the eruption in 2000. The questionnaire use was the IES-R (Impact Event Scale- Revised) which informs and measures sex, age, demographic characteristic of occupation, stress event, and PTSD. The IES-R was translated into Japanese by Asukai, of The Tokyo Institute of Psychiatry, and his joint researchers with the permission of the original authors (Weiss & Marmar, 1997). The questionnaires were distributed and collected by the researcher and the volunteers by visiting the Tsubota district of Miyake village. The survey response was 215, and the rate was 75.3%. The survey respondents were composed of 99 males (46.0%) and 116 females (54.0%). Their ages varied between 20 to 88, and the average of the respondents was 64.4 years ($SD=13.8$). The occupations of the respondents were unemployed (27.4%) and farming (23.7%). These occupied half the number of respondents' occupations. Additional occupations included; civil servants (6.0%), construction industry (5.6%) accommodations (5.1%), shops (4.7%) and restaurants (4.2%) adjoined by the little difference. It is pointed out by Kato and Iwai (2000) that the cut-off point to judge whether the symptoms indicate PTSD is the IES-R standard score of 24 points or more. When the ratio of PTSD in the present study was calculated according to this standard, 27.6% of the survivors were found to indicate PTSD. Next, the PTSD group and non PTSD group were examined to show characterizing factors in their differences. When the χ^2 test was performed to examine differences in gender, the ratio of PTSD women (36.2%) was significantly higher than men (17.1%) ($p < .01$). In relation to age, notable differences were shown ($p < .001$). The group of participants above 65 years of age (40.9%) scored a higher ratio of PTSD than the

group of participants under 65 years of age (13.3%). In relation to their occupations, the residents who had undesirable job situations (32.8%) showed significantly higher signs of PTSD than the residents who had desirable job situations (16.4%) ($p < .05$). In relation to the stress event, the residents who held concerns over the influence of volcanic gas on health (34.0%) compared to the residents who did not (14.1%), showed a higher ratio of PTSD ($p < .01$). The residents who had concerns about wearing gas masks and gas warning systems (34.3%) compared to the ones who did not (16.0%) also showed a higher ratio of PTSD. As a result of the survey on the residents who continue living under the stress of the repeating disaster, 27.6% showed an indication of PTSD. In the prior research (DSM-IV, 1994), the lifetime prevalence (of PTSD) was shown to be between 1~14%, and the numerical value that had been obtained in the present study was high. The study suggests that living under the influence of repeated harmful volcanic gas, the survivors' mental health is continuously jeopardized, and the damage to their mental health caused by the repeating disaster became visible through chronic symptoms. In relation to gender, females showed more indications of mental damage. In relation to age, the older generation group showed more signs of PTSD. As for the relation with occupation, the residents who had undesirable job situations showed symptoms of PTSD. The above results concur with the results of previous research. Conclusively, the enhancement of social support, such as mental care and recovering employment, are necessary for those who show symptoms of PTSD.

Keywords: *natural disasters, post-traumatic stress disorder, Japan, demographic variables, occupation*

The repeating natural disaster and the mental health of the survivors

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Traditionally in the study of the mental health of disaster survivors, the disaster itself is a non-recurring event. However, in the case of the disaster survivors of Miyake Island there is a rare study of an on-going process of the island's

residents trying to adapt to recurring natural disaster as part of their lives. On a February day in 2005, the residents of Miyake Island returned to their homes after an absence of more than 4 years following the volcanic eruption in 2000. However, even 9 years after the eruption, at the time of this research, the majority of the area of Miyake Island was still covered with poisonous gas. The readings of the gas still exceeded the standard thickness for volcanic gas based on the Environmental Law. Residents of Tsubota district on Miyake Island were still working on recovery and reconstruction under the environmental stress at the time of the research. It is this paper's goal to determine how the mental health of disaster survivors in the Tsubota district is influenced by the recurring disasters. The research focused on following two points: 1) determining the mental health status of the residents after 9 years of the disaster using GHQ28; and 2) making clear the causations that relate to high-risk people. As a result of the research, extraordinarily high scores of high-risk people were found, according to GHQ28, exceeding by more than 4 times the score of the average population in Japan. Moreover, using multivariate logistic analysis, concerns by the residents such as not being able to go home, unemployment, and work conditions were identified as the main risk factors in this case.

Keywords: *recurring natural disaster, natural disasters, mental health, survivors, Miyake Island*

The revoicing as educational discourse strategy

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This study had two purposes. The first purpose was to explore how teacher's "revoicing" (O'Connor & Michaels, 1996) were used to control classroom discourse. The second purpose was to investigate the effects of revoicing on children. A moral class was selected for observation. In this context, teacher made an effort to elicit the children's own opinion. Therefore, multiple utterances of the children appeared in the morals class. In an elementary school fourth grade classroom, morals classes were observed for 4 hours. The observational

records were sorted based on Mehan's IRE structure (Mehan, 1979). Furthermore, teacher's and children's utterances were analyzed quantitatively by categories and qualitatively by contents. The roles of revoicing in the process of composing class were analyzed by focusing on the number of utterances per minute. In addition, the opinions of the children were recorded by reaction-papers. The categorical analysis showed that revoicing was functionally divided into two types. One was "initiative revoicing" which deepened the contents of children's utterances. The other was "responsive revoicing" which meant simple response. The correlational analysis showed that teacher's revoicing were correlated with the children's utterances ($r=.45$). In addition, teacher's initiative utterances were negatively correlated with the number of revoicing ($r=-.28$). The contents of reaction-papers showed that children's opinions were strongly biased toward certain categories. The qualitative analysis suggested that teacher effectively used "initiative revoicing" and "responsive revoicing" to control classroom discourse. The quantitative analysis suggested that teacher applied children's utterances to configure class by using revoicing instead of initiative utterances. On the contrary, contents of the reaction-papers suggested one possibility. It was that children implicitly recognized the teacher's orientation, so multiple utterances of children might be constrained in classroom discourse.

Keywords: *revoicing, teachers, Mehan's IRE structure, initiative revoicing, responsive revoicing*

The role of driving behavior determinants in detecting reckless drivers

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This research examined driving behavior determinants (DBD), which reflect the characteristics and attitudes of drivers who are involved in reckless driving. Ways of improving studies and making practical use of the DBD concept are also suggested. Recent related research on the concept of DBD and its needs for improvement was reviewed in the first instance.

Lee (1990) first suggested the concept of driving behavior determinants. This theory explains that drivers' personal and socio-cultural factors indirectly affect their behavior, but DBD (e.g., risk sensitivity and law abidance) created by drivers' personal and socio-cultural factors, directly affect the drivers' behavior. The researchers who conducted the first illustrative study (Kim, Oh, and Lee, 2006) insisted that DBD consist of risk sensitivity, law-abidance, and situational adaptability. Lee and Oh's (2007a) follow-up study found that risk sensitivity and law-abidance are correlated with violations such as speeding and drunk driving, and situational adaptability is correlated with failure to cope in certain traffic scenarios. Upon further analysis, Lee and Oh (2007b) found situational adaptability was divided into two factors; personal-relational adaptability and physical-situational adaptability, and problems in personal-relational adaptability explained drivers' speeding and distractibility. However, Oh and Lee (2007) claimed that there were no differences between DBD levels of reckless drivers and normal drivers, finding only differences in DBD factors effect sizes. This weakness was explained as a limitation of the self-reporting system they used, and the researchers suggested that a standardization procedure would solve this problem. The existence of DBD and its effects on reckless driving have been verified by various studies. DBD sub-factors, however, cannot be considered as established yet. Also, certain steps are needed in order to use DBD for the detection of reckless drivers and creation of education programs for them. First, as many human factors as possible (e.g., anger and introversion) have to be considered, so that many different kinds of reckless behavior can be predicted. Second, we need a standardization procedure for scoring DBD, to protect objectivity, which may even make accident prediction possible. To address these weaknesses further studies, with large sample sizes and even inter-cultural sample groups, are needed.

Keywords: *driving, driving behaviour, reckless driving, personal-relational adaptability, physical-situational adaptability*

The role of intrinsic motivation in the relationship between justice perception and organizational effectiveness

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Contingent employees in South Korea are typically associated with the staffing company, which originally recruited them and provides their wages and manages their opportunity for promotion, and are also associated with the assigned company, where they actually work. While contingent employees work in the assigned company, they are likely to be surrounded by full time workers, who earn more and have a more permanent job within that organization, and through a process of comparison, may feel discouraged in their work, resulting in lower levels of organizational effectiveness. Because of such potential problems, organizations need to develop management skills to cater for contingent employees specifically (Belous, 1989). Justice perception, which is associated with motivation, was expected to be an important factor to enhance organizational effectiveness of the assigned company. First, we seek to investigate whether the relationship between distributive justice perception and organizational effectiveness (e.g., job satisfaction, organizational commitment, and turnover intention) is mediated by motivation itself. Second, we attempt to examine the possible mediating effects of intrinsic motivation in the relationship between justice perception and organizational effectiveness, respectively. Lastly, we aim to test whether the relationship between justice perception and turnover intention is mediated by intrinsic motivation. Three hundred currently contingently employed workers (131 females, Age $M=31.97$, $SD=7.39$) completed measures of distributive perception, extrinsic and intrinsic motivation, two measures of organizational effectiveness, comprising of job satisfaction and organizational commitment, and a measure of turnover intention. The results showed a reliable mediating effect of intrinsic motivation in the relations between distributive justice and organizational effectiveness (i.e., job satisfaction, organizational commitment, and turnover intention). Our research suggests that for contingent employees, it is important for

staffing companies to create environmental conditions which could encourage their distributive justice perception toward the staffing company as well as their internal motivation in order to produce better performance in the field. It is helpful for the contingent workers to communicate with each other. The effect of extrinsic motivation also implies that if employees perceive fair treatment from the staffing company, both assigned and staffing companies could influence extrinsic motivations to increase organization effectiveness.

Keywords: motivation, organisational effectiveness, job satisfaction, organisational commitment, employees

The role of oxytocin: A review

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The aim of this paper is to provide a critical review of the role of oxytocin. Oxytocin is a neuropeptide hormone produced in the hypothalamus, stored in, and released from, the posterior pituitary gland (neurohypophysis). Secretion of oxytocin is a neuro-endocrine response. The actions of oxytocin are mediated by specific, high affinity oxytocin receptors. Oxytocin is a very interesting hormone that has both peripheral (hormonal) actions, and actions in the brain and central nervous system. This presentation will provide a critical review of evidence to date and highlight relevant areas emerging that will be of interest to psychologists. Briefly, its peripheral actions are as follows. Oxytocin is best known for its role in female reproduction. It is released in large amounts during parturition resulting in uterine contraction. This facilitates the birth process, control of bleeding and involution of the uterus. Oxytocin has a key role in the ejection of milk from the breast during lactation (let down reflex). Furthermore, oxytocin may be involved in sexual response in humans. The relationship between oxytocin and sexual response remains unclear. Meanwhile, its actions on the central nervous systems are as follows. Once secreted, oxytocin cannot re-enter the brain because of the blood-brain barrier. Instead, the behavioural effects of oxytocin are thought to reflect release

from centrally projecting oxytocin neurons, different from those that project to the pituitary gland, or which are collaterals from them. Oxytocin has been implicated in non-social behaviours such as pain perception, anxiety learning and feeding. More recently there has been increasing interest in the role oxytocin may play in other behaviours such as social memory and attachment, sexual and maternal behaviour, aggression, human bonding and trust. It has been suggested that oxytocin expression may be involved human disorders characterized by aberrant social interactions, such as autism and schizophrenia. The trust-inducing property of oxytocin may emerge as a controversial topic. It has been suggested that the trust-inducing properties of oxytocin may help those who suffer from social anxieties and mood disorders while there is another school of thought that this potent hormone has the potential for misuse in the wrong hands.

Keywords: *Oxytocin, peripheral nervous system, central nervous system, review*

The role of phonological information in bilingual processing: Multimodal interaction in word perception

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Recent studies on visual word recognition have found that bilinguals nonselectively activate lexical information regarding both of their known languages when reading text. However, the mechanisms involved in this process have not been fully identified. Many previous studies have tried to explain this phenomenon using the phonological mediation hypothesis. According to this hypothesis, phonological information of both languages activate automatically by spell-sound correspondence during the initial phase of bilingual processing. To examine this hypothesis, previous studies have used priming tasks where bilinguals were presented with visual language in short stimulus onset asynchrony (SOA). Priming tasks, however, are limited to testing phonological activation indirectly through visual word processing. The best way to examine phonological activation of visual words is to present visual words and auditory words spontaneously. If a bilingual's visual word

recognition is mediated by phonology, it should be affected by auditory words. To test this hypothesis we designed a multimodal phonological decision task. In this task, participants have to decide whether a spontaneously presented visual word and auditory word pair is phonologically different or the same. Forty Korean-English bilinguals will participate in this experiment. They will be randomly assigned to either the Long-SOA (1500ms) group or the Short-SOA (130ms) group, and each SOA group will be exposed to four types of stimuli pairs: 1) Same-meaning Same-language; 2) Same-meaning Different-language; 3) Different-meaning Same-language; and 4) Different-meaning Different-language. Eighty word pairs will be randomly presented [Study in progress]. In the Short-SOA group, mean reaction times for the Same-meaning Different-language word pairs will be significantly slower than the for the other conditions, and error rates will also be significantly higher than in the other conditions. These expected results will indicate that phonological representations generated from words in one language can activate words in another language, and is consistent with previous studies of phonology in bilingual word recognition. They will also indicate that a multimodal task can be useful for phonological activation in bilingual processing.

Keywords: *bilingual, phonological information, bilingual processing, multimodal interaction, word recognition*

The role of positive/negative experiences of interpersonal interaction and goal achievement on social self-regulation

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Social Self-Regulation (SSR) has been defined as the ability to inhibit or assert the self depending on internal and external needs in a social setting when there is discrepancy between desire, intention, and current perception (Harada, Yoshizawa, & Yoshida, 2008). Previous studies have clarified that the effect of SSR on antisocial behaviors is stronger than the temperament

facets of self-regulation (behavioral inhibition/approach system, effortful control). Although the SSR is supposed to be built through interpersonal interaction and goal achievement in adolescence, few studies have examined the factor to improve SSR directly. In the present study, we aim to explore whether the positive/negative experiences of interpersonal interaction and goal achievement could be a factor to improve SSR. A total of 166 undergraduates were instructed to recall their middle-to-late adolescence (from junior high school to college). The self-regulation ability during junior high school years and current SSR ability was assessed using the Social Self-Regulation scale consisting of self-assertiveness, patience, and emotion/desire inhibition. The positive/negative experiences during high school years were assessed by a scale measuring interpersonal interaction and goal achievement experiences. The results of structural equation modeling revealed that positive experiences of goal achievement promote all three facets of SSR; self-assertiveness, patience, and emotion/desire inhibition. Additionally, experiences overcoming negative interpersonal conflict promoted self-assertiveness. The results were supporting Arnett's (2008) claim that the interpersonal interaction in broader circumstances promotes socialization in adolescence. These results indicate that the experiences of goal achievement contribute to self-regulation success in social settings by promoting SSR ability. Moreover, it is revealed that not only positive experiences but also negative experiences contribute to improving an aspect of SSR if the individual had overcome them. The features that highlight SSR compared to other self-regulation abilities are discussed. Future research could benefit from adopting a longitudinal and participant-observation based approach.

Keywords: *social self-regulation, goal achievement, interpersonal factors, negative experience, positive experience*

The role of psychological climate in an occupational stress and coping process: A transactional model

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In this study, Psychological Climate (PCT) is examined using Lazarus and Folkman's (1984) theoretical framework of transactional stress and coping. The first aim was to establish the components of the stress and coping process that would be affected by a person's perceived work environment (i.e. PCT). Secondly, this study aimed to determine if a general model could be produced that parsimoniously reflected the impact of a person's perceived work environment on his/her stress and coping process in the workplace. Paper- and web-based surveys were completed by 196 participants who were employed in various occupations. Respondents were required to be employed on a part-time or full-time basis for at least six months. Participants identified the most stressful situation they were currently experiencing at work and appraised the threat and level of control they had over the situation. Coping strategies and psychological stress levels were evaluated at a 2-4 week follow up. Path analysis through structural equation modeling successfully identified and validated the Transactional Stress and Climate (TSC) model. The TSC model shows the importance of a person's perception of his/her work environment on the experience of stressful encounters at work. The TSC model suggests that when a person evaluates his/her work environment as being psychologically safe (high PCT), stressful encounters at work are appraised as less threatening and more controllable. The TSC model also suggests that psychologically safe work environments are associated with lower levels of psychological stress 2-4 weeks later. This research shows the importance of employee perceptions of work environment (PCT) when evaluating stress and coping processes in the workplace.

Keywords: *psychological climate, transactional, coping strategies, occupational stress*

The role of team goal setting and team leadership as predictors of the team competency

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So far, team ability has been discussed in terms of the properties of teamwork among members,

such as mutual understanding, communication, cooperation, and so on. Recent work teams are expected to be successful not only in sustaining good outcomes within the team, but also in adapting teams to changing task environments. Therefore, different kinds of teamwork are needed for sustaining and adapting, respectively. Taking these things into consideration, we proposed a new concept of 'team competency' which represents the properties of teamwork from sustaining (lower level) to adapting (higher level). In this study we explored the facilitative effects of team goal setting (performance goal, learning goal) and team leadership (empowerment, information sharing) upon team competency. Team goal setting and team leadership, respectively, would facilitate mainly lower level and high level of team competency. Thirty teams (146 persons) from 2 different Japanese companies participated in this study. Participants were asked questions pertaining to team goal setting (performance goal and learning goal setting), team leadership, and team competency. Before aggregating the individual-level scores to obtain the team level score, the viability of this procedure was examined statistically. Indexes of RWG and ICC were examined and verified. The results of hierarchical multiple regression analysis revealed that setting team performance and learning goal had a significant relationship with cohesion and mutual understanding, which represent lower levels of team competency. In contrast, a higher level of team competency was determined by setting a team learning goal, but not by team performance goals. Further, empowerment by the team leader had significant positive effects on higher levels of team competency, on creative thinking, autonomous innovation, as well as lower levels of team competency of cohesion, and mutual buck-up. This study suggested that two types of team goals have different effects on team competency. Team performance goal setting enhanced cohesiveness and mutual understanding among members, whereas team learning goal setting had a positive impact on team adaptation and innovation. Furthermore, the results suggest that empowerment by a team leader provides basic and necessary conditions for enhancing team competency.

Keywords: *team-work, goal setting, leadership, team competency, Japan*

The role of working memory in third grade children's process of mental abacus calculation

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The aim of this study was to investigate the specific temporary storage roles played by visuo-spatial sketchpad subcomponents in the process of mental abacus calculation of children. A 2×3×2 mixed design was adopted to examine the performance between trained children and untrained ones, finishing mental arithmetic under three conditions which were control, concurrent articulatory suppression, and concurrent hand tapping. Results showed that the visuo-spatial sketch pad only produced an interference effect on the trained children's reaction time and accuracy. To conclude, the visuo-spatial sketch pad was much more responsible for temporary storage aspects of mental abacus calculation.

Keywords: *temporary storage, visuo-spatial sketchpad, mental abacus calculation, children*

The role of writing about the same trauma or writing different traumas in an emotional disclosure procedure

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The present paper is inserted into the studies on the effectiveness of the emotional disclosure of traumas and highly stressful events. Specifically, it studied the role on mental and physical health of writing on the same trauma or different traumas. Sixty students of psychology grade were assigned to three experimental conditions: 1) to write three consecutive days on the same trauma; 2) to write about different traumas; or 3) to write on trivial affairs. As dependent variables, the positive and negative effect, the level of symptoms of post-traumatic stress disorder, the level of depression and the self-

reported level of health, were assessed. Measurements were carried out session by session, and two months later. The results indicated that the negative affect diminished and the positive affect was increased, session by session. Two months later, both symptoms of post-traumatic stress and physical health were significantly diminished for the group that wrote on the same trauma, in comparison with the other two groups. The depression level also diminished, both for the group that wrote on the same trauma, and for that which wrote on different traumas. Although the model of cognitive exposure has greater support, the results are discussed according to the need for a new and more extended explanatory model.

Keywords: *writing, trauma, emotional disclosure, post-traumatic stress disorder, depression*

The role of Zhong Yong in group decision making

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Examining a South Korean sample, a recent study reported that the risk decisions of South Koreans were facilitated by group situations, with gender compositions of male, female and mixed groups (Park & Kim, under review). This is because a diffusion of responsibility is a pre-established social norm in South Korea. However, one may not be able to generalize that the group facilitation effects observed in South Koreans would also manifest in Chinese. That is because Chinese put a higher value than South Koreans on 'Zhong Yong', which encourages moderation and avoidance of extremes within groups by combining divergent decisions among group members. The present study aims to show that the risk decisions of Chinese would not be facilitated by group situations due to Zhong Yong, regardless of gender composition. 284 participants (155 females; Age: $M=20.9$, $SD=1.41$) were randomly assigned to male only, female only, and mixed gender experimental groups, or to a separate control group for each gender. In the pre-test, each participant completed the Choice Dilemma Questionnaire (CDQ; Kogan & Wallach, 1964) assessing risk decisions. Then in the manipulation period, experimental group participants conducted a

group discussion ($n=4$) for 10 minutes, with the aim of reaching a group consensus on a new, but identical copy of the CDQ. Control group participants took a break for 10 minutes. Throughout the following analyses, South Korean data were reproduced with permission. Unlike South Koreans, risk decisions of Chinese were not facilitated by group situations regardless of gender composition. To demonstrate whether the observation results from Zhong Yong, difference scores were calculated by averaging the lowest and highest CDQ scores at pre-test among group members. Comparison of this score to the group CDQ scores revealed no significant differences in all of the three experimental groups, indicating the possibility that group decisions reflected a compromise between individual opinions. However, a similar examination of South Korean scores yielded significant differences in all experimental groups, indicating no effect of Zhong Yong. Despite the fact that both countries share collectivist values, the data suggest that Zhong Yong could play a critical role in distinguishing the group decision-making processes of Chinese and South Koreans.

Keywords: *group decision-making, Chinese, South Koreans, Zhong-Yong*

The sexual differences of coping behavior in situations arousing "anger" emotion in university students

TANAKA, C. (Gakushuin University)

Human behaviors and cognitions are often influenced by emotions. Especially, 'anger' leads to irrational judgments and aggressive behavior, and then these may be the causes of criminal or social maladjustment behaviors. This study used some scenarios depicting provocations from one's friend which aroused anger, and investigated what kinds of behavior occurred and whether there were any sexual differences. A total of 111 undergraduate university students (males = 48, females = 63) completed the questionnaire. The scenarios depicting provocations had three levels of the friend's reputation: compared with participants, the friend's reputation is (1) high; (2) equal; (3) low (levels of reputation, between-participants). The

scenarios also had two situations: a friend demonstrated the provocation to you where (1) another person was not around you; (2) someone was around you (situations, within-participants). After reading two of six scenarios, students were asked for their degree of anger. Next, the participants were asked to rate 34 behaviors according to the degree they wanted to perform it. The scale had five points (1 = extremely unlikely – 5 = extremely likely). An ANOVA, involving 2(sex) × 2(situations) × 3(levels of reputations), revealed a significant main effect of situations for the degree of affect ($F(1,105) = 31.72, p < .01$). Factor analysis was conducted for 34 behaviors and then 6 factors were identified; (1) verbal aggressive behavior, (2) direct aggressive behavior, (3) indirect aggressive behavior, (4) time-latent aggressive behavior, (5) fear and (6) escape. The results of the analysis found a significant main effect of situations ($F(1,103) = 11.205, p < .01$) and sex ($F(1,103) = 4.771, p < .05$) on direct aggressive behavior. The interaction effect between situation and sex in time-latent aggressive behavior was significant ($F(1,103) = 6.48, p < .05$). Finally, the analysis detected a significant main effect of sex in fear ($F(1,104) = 26.70, p < .01$). This study suggested that people felt anger most strongly when they were exposed to the provocation by other person in a group situation, regardless of their sex and friend's reputation. Sexual differences were found; females tended not to present aggressive behaviors in group situations. Additionally, a sensitivity of 'fear' in females was found.

Keywords: *anger, behaviour, gender, provocation*

The source of motivation for next trial among business people

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This study focused on the motivational function of reflection on past experience.

Markman (2003) argued that there are two contrasting reflections. The first is "Reflective processing," whereby the present standing is almost ideal. The second is "Evaluative processing," whereby the present standing is far

from an ideal one. The previous study showed that people who engage in evaluative processing have higher motivation and improve their performance (Markman et al., 2008). However, they did not distinguish among experiences people reflected, success or failure. As for this, another study (Gilbar & Hevroni, 2007) reported that people with evaluative processing of failure suffer depression and lose their motivation to try the next task. We aimed to reconcile these findings by discriminating the experiences people reflect in terms of success and failure. We examined the effect of reflective and evaluative processing upon motivation for the next trial. Two hundred and fifty nine business people were asked to complete a series of questionnaires, asking how they reflect on their successful and failed experiences, respectively, in daily work life. They were also asked how much motivation they have for the next trial after success and failure. The main results were: (1) people who engage in evaluative processing of their failures tend to have higher motivation for the next trial after success and failure; (2) people who engage in reflective processing of their successes tend to have higher motivation for the next trial after success and failure; and (3) among people who engage in evaluative processing of their failures, motivation is higher for those who engage in reflective processing of success more often. These results suggest that evaluative processing of failure, as Markman (2008) proved, and reflective processing of success, lead to improved motivation for the next trial. Reflective processing on success may be necessary in order to prevent motivation decline by the evaluative processing of failure.

Keywords: *motivation, reflection, past experience, success, failure*

The study of brain/behavioral systems as predictors of personality types A & D

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This study was carried out to investigate components of Behavioral Systems including, behavioral activation (approach and active avoidance), behavioral inhibition (extinction and passive avoidance) & fight-flight (fight and flight)

systems as predictors of personality type A & D in Shahid Chamran university postgraduate students. The sample consisted of 273 students who were selected by stratified random sampling method. The Persian form of Gary-Wilson Personality Questionnaire (Wilson, Barrett & Gray, 1989), Type A Questionnaire (Najarian, Macvandi, Dabbagh & Nikfar, 1996), and Type D Scale-14 (DS14) (Denollet, 1998) were administered to all subjects. To analyze the data in this study, regression analysis was used. The results of this study, showed that among all of the components of brain/behavioral systems, extinction ($\beta=0/26$, $p<0/001$) and passive avoidance ($\beta=0/24$, $p=0/001$) can predict type D significantly. On the other hand, fight ($\beta=0/16$, $p=0/004$) and approach ($\beta=0/16$, $p=0/01$) can predict type A significantly. These findings suggest that type A and type D are distinct structures. The implications for theoretical development are discussed.

Keywords: *personality type A, personality type D, Gary-Wilson Personality Questionnaire, regression analysis, behavioral systems*

The study of educational expectations, filial piety and willingness to attend cram schooling of Taiwanese senior high school students

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The purpose of this study was to explore the relationship between educational expectations, filial piety and willingness to attend cram schooling. Academic performance is the most important role obligation of children and adolescents to their family. Students may go to cram school out of their own choice or parents' demand. Therefore, filial piety also contributes to the drive for academic achievement. A questionnaire was used to investigate educational expectations among senior high school students and their parents, students' filial piety belief, and their willingness to attend cram schooling. Two hundred high school students served as participants. Both student's and parental educational expectations could predict willingness to attend cram schooling. Filial piety

of reciprocity was positively correlated to willingness to attend cram schooling. Students went to cram school not only to achieve good grades, but also to fulfill parents' educational expectations for them. Academic achievement helped children fulfill their role obligation to parents.

Keywords: *education experience, filial piety, cram schooling, academic achievement, role obligation*

The study on difference of aspect on burnout syndrome and depression

KISHI, T. (Toho University), YAMADA, Y. (Toho University)

Some studies have showed that there is a moderate correlation between burnout and depression, although psychologists have taken different approaches to each of these mental problems. We investigated the different aspects of burnout and depression in hospital nurses. Participants were 503 staff nurses (30 males and 473 females) who worked in a university hospital in Japan. They were asked to answer a questionnaire included demographic items, MBI-GS Japanese version, and CES-D Japanese version. Both of psychological scales were computed for each subscale. Exhaustion score and cynicism score were moderately correlated with somatic score and depressive affect score. Professional efficacy score was moderately correlated with positive affect score. But, any MBI-GS subscales score were not correlated with interpersonal relations score. Physical symptoms and feelings of fatigue are common aspects in burnout syndrome and depression. However, interpersonal relations are depression specific, and not included in burnout syndrome.

Keywords: *burnout, depression, nurses, MBI-GS Japanese version, CES-D Japanese version*

The synergy and utility of proactive coping and positive reframing on negative affect

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Major life events can cause significant stress, even if those events are considered positive. A crucial factor determining experienced stress is coping strategy used, which impacts both practical and psychological outcomes. Proactive coping is a forward-looking coping strategy, which promotes engagement with challenging situations and is associated with reduced worry, stress, and perceived threat. The goal of the present study was to explore the relationship between the psychological reframing of life events, either positive or negative, the degree to which proactive coping was used to deal with these events, and negative psychological outcomes. Data were collected from 472 undergraduate students at a large Canadian university in an internet experiment. Participants were asked to think of a personally significant positive or negative event, and then to write about it from a positive perspective (focusing on benefits) or a negative one (focusing on harm), creating four experimental conditions. Participants were assessed on three dependent variables, negative affect, depression, and perceived threat associated with the event. Regression analyses were conducted in which predictors were event, perspective, proactive coping, and their interactions. Results of the regression analyses showed significant interactions between proactive coping and perspective on measures of negative affect, depression and threat. Higher levels of proactive coping predicted to lower levels of depression, negative affect, and threat, but only when participants focused on positive aspects of the event. These results demonstrate the moderating role of proactive coping in dealing with feelings associated with significant life events. When individuals use high levels of proactive coping and focus on the benefits of a recalled life event, the experience of deleterious affect is attenuated following recollection. These results have practical and theoretical implications for psychological functioning. In particular, they illustrate the link between positive thinking and proactive coping as well as their synergy in promoting adaptive functioning.

Keywords: *proactive coping, positive reframing, stress, positive thinking, life events*

The variance trend by personality of the reaction time: Personality traits of

extraversion-introversion, nerves-toughness

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In this study we measured reaction times (RT) to personality trait terms and examined RT as the quantitative indicator to determine whether the personality trait terms match the participant's personality. For this purpose we examined the relationship between personality traits and RT to personality trait terms. It was hypothesized that reaction times to personality trait terms would change with the personality traits in this study. This experiment measured RT to personality trait terms as on the two axes of extraversion and emotional stability. In the simple response session, participants responded to personality trait terms as stimuli on a computer. In a personality self-rating session, participants valued whether personality trait terms matched to themselves or not by pushing a circle mark or divorced mark. Finally, participants executed "scale construction of a Big Five personality inventory". The participants were 40 university and graduate students aged 20–30 years. For the sake of examining RT to personality trait terms, we divided and examined four models, raw data, personality valuation time (Dander's model), the increasing rate of reaction time, and the increasing rate of personality valuation time. The raw data did not show a relationship between personality traits and the RT to personality trait terms. By personality valuation time, it was found that the RT of the extroversion and emotionally unstable was longer than personality valuation time and quite variable SD. Two-way ANOVA revealed that a main effect was found for emotional stability by the increasing rate of personality valuation time ($F(1,1261)=16.52, p<.01$). A main effect was found for extraversion scores by the increasing rate of reaction time ($F(1,1261)=21.09, p<.01$) and the increasing rate of personality valuation time ($F(1,1261)=20.48, p<.01$). This experiment suggested that the RT of the participants with high emotional stability scores was continued by a constant reaction in two sessions, but as their own personality valuation increased many times, reaction times were quite variable. It is suggested that the participants with high

extraversion scores had quite variable reaction times to stimulus terms and personality valuation. It was difficult to examine experimentally the relationship between personality traits and reaction times to personality trait terms. However, this result suggests that RT would be able to show personality traits as behavioral evidence.

Keywords: *reaction time, personality traits, extraversion, introversion, emotional stability*

The Virtual Errands Task (EVET): An experimental study of the complexities of everyday cognition

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What cognitive processes are important for multitasking? An influential model of multitasking performance (Burgess et al, 2000) predicts specific relationships between three latent cognitive constructs: planning, retrospective and prospective memory (PM). However, the role of planning was not well supported by the cognitive data. The study aim was to create a virtual analogue of the Multiple Errands Task (Shallice & Burgess, 1991), and apply that data to the Burgess et al. model. In addition to the measures used to support the original model, we included individual difference measures of spatial and verbal working memory span, planning, retrospective and prospective memory. The Virtual Errands Task (EVET) requires participants to attempt eight location based errands in a four storey virtual building (e.g., collect computer from room G4). The virtual building was created using the Valve Hammer Editor, a 3D map creation program provided with the computer game Half-Life 2. 157 participants (95 females, 62 males – overall mean age 19.6yrs) learned the errand list to criterion and made a plan before starting the test. Individual difference measures assessed retrospective and working memory capacity (spatial and verbal), planning ability and PM. Multiple regression analysis showed that independent measures of spatial working memory span, planning ability and retrospective memory were significant predictors of EVET performance. Results are supportive of accounts

that argue for domain-specific working memory processes, and highlight a role for spatial working memory capacity in multitasking. The role of planning and retrospective memory in multitasking was supported in this dataset and is in line with the Burgess et al. model. However, data are in disagreement over the importance of prospective memory (as indexed by independent measure of PM).

Keywords: *virtual errands task, cognition, multitasking, working memory, prospective memory*

Thinking biases in searching for explanation: Plausibility effect and local coherence

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The authors hypothesized that behind the Post hoc Explanation Bias, people may emphasize the plausibility of every individual explanation rather than the existence of alternative explanations. This in turn generated the second hypothesis that the attention to plausibility may lead such individuals to the neglect the contradiction of existing explanations and induce local coherence. Two experiments were designed to test these hypotheses. In Experiment 1, four stories with unusual events were used. Participants (228 college students) were asked to indicate to what degree they thought the explanation presented after each story was acceptable. The experiment employed a 3 (one, two, or three alternative explanations mentioned) x 2 (with or without a personal explanation) independent sample factorial design. In Experiment 2, the researchers devised two contradictory statements plausible in individual contexts so as to test if participants (284 college students) would accept these two conflicting statements equally as predicted by the local coherence hypothesis. Two target stories with different task forms were utilized. Participants were asked to evaluate the probability that an explanation was true (Statement A) in one story and the feasibility (how likely it will work in practice) of a suggestion (Statement A') in the other. Two target stories were adequately separated by four

filling stories. In addition, the first story in Experiment 2 was designed to have three versions: a control version (possible explanatory statement), a prediction version (predictive statement), and an explanation version (post hoc explanation). The results of Experiment 1 are consistent with the plausibility hypothesis: (1) participants demonstrated less acceptance of the explanation offered if he had his own explanation; (2) the number of alternative explanations had no effect on participants' acceptance of the particular explanation offered. The result of Experiment 2 evidently supports the local coherence hypothesis. Also, a significant positive correlation was found between the participants' response to each version of the first story and their response to the second story, as predicted. Thus, to conclude, both plausibility effects and local coherence hypotheses, which are supposed to be the mental mechanism of Post hoc Explanation Bias, were supported by the data from the two experiments conducted.

Keywords: *post hoc explanation bias, plausibility effect, local coherence*

Time elapsing since cessation of cannabis use: Implications for visuospatial memory performance

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Previous studies have shown cannabis use to be related to impaired performance on some cognitive tasks, including those drawing upon visuospatial memory. However, whilst evidence now exists for a withdrawal syndrome following the use of this drug, relatively few studies have examined the relationship between the time elapsing since cannabis use was ceased and cognitive performance level. The neurotoxic properties of cannabis make this an important question. The present study examines this relationship with regard to visuospatial memory span. Visuospatial memory span was measured for 58 abstinent cannabis users (mean age 23.0

years, $SD = 3.8$ years) using a computer generated grid task. Measures of IQ, mood, substance use history, and demographic characteristics were also obtained. Use of cannabis within 7 days of testing was an exclusion criterion for the study except where the toxicological analysis of urine samples showed samples to be negative for cannabis and other illegal drugs. The independent variable was based on estimated time since last cannabis use (range of 3 to 4,377 days) divided into quartile groups with cut offs at 14, 65, and 615 days. The groups did not differ in lifetime cannabis consumption, or in age for the onset of alcohol and cannabis use, respectively. Significant inter-group effects for background variables were only found for age and Ravens matrices Set E scores. Mean visuospatial memory span progressively improved across the first three quartiles, but the fourth quartile showed the poorest span scores. Whilst a one-way ANOVA showed no significant effect for span scores, simple contrasts showed the fourth quartile to have performed significantly worse than the third. This contrast remained significant when age and Set E scores were controlled as covariates. There appears to be no immediate explanation from substance use or background variables for the reversal in visuospatial memory performance found in the fourth quartile group. Longitudinal or prospective methodology is required for the further investigation of this effect. The employment of battery measures testing a range of cognitive abilities would also be desirable.

Keywords: *cannabis, visuospatial memory, abstinence*

To appoint problem-solving subtest quota on marriage adjustment of male and female married students in Islamic Azad University (Iran)

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The aim of this research was to: (1) Appoint the quota of each one of the problem-solving subtests (controlling, creativity and self-confidence) to explain marriage adjustment variance; (2) review of relationship between

gender and marriage adjustment, and (3) review of relationship between gender and problem-solving pieces. This study is under the applied research category and is a correlation study. Out of all students of Islamic Azad University–Roodehen Branch (Iran), 180 male and female married students based on "Morgan" table were selected as a sample for the research. The research tools were "Spanner" marriage adjustment test and "Kedidi" problem-solving scale; and the data were analyzed using multi variable regression. Problem-solving subtests explain almost 1%8 of joint variance between problem-solving and marriage adjustment. There is a negative significant correlation between marriage adjustment and Controlling; and for each unit of standard deviation on Controlling, 0.175 SD would be changed on marriage adjustment. There is a positive significant correlation between marriage adjustment and Creativity and self- confidence and for each unit of standard deviation on creativity and self-confidence, 22% and 19% SD changed on marriage adjustment respectively. Moreover, there is no significant correlation between gender with marriage adjustment and Problem-solving pieces. Problem-solving subtests along with age, social status, level of education, role of gender, number of children, marriage duration, can be one of the effective factors on marriage adjustment; and to increase marriage adjustment some solutions can be made by problem-solving skill training.

Keywords: *problem-solving, marriage, creativity, self-confidence, controlling*

To learn or not to learn, that is a question: Understanding the low-achieving secondary students in secondary vocational education of mainland China

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While much is known about the achievement of high ability Chinese students, much less research has focused on their lower ability peers. This poster reports the first study of examining the interrelationships of approaches to learning, academic self-concept, and locus of control and their associations in influencing low-achieving secondary vocational education (SVE) students'

academic achievement. In particular, this study served as a prerequisite to develop appropriate intervention programs to improve SVE students' academic achievement and assist in their successful secondary vocational employment and development. A quantitative study, the self-descriptive questionnaire (SDQI), learning process questionnaire (LPQ), and internal-external locus of control scale were administered in a 45-minute regular class to all the participants (N =310). Students' academic achievement data were obtained from the school-based tests files. Path analyses were run to analyze collected data. Path coefficients from academic self-concept to students' academic achievement and to both deep and achieving learning approaches were substantially positive ($p < .01$). However, the coefficients from locus of control, both achieving and deep learning approaches to academic achievement were statistically insignificant (and close to zero). This study identified the likely major role of academic self-concept in affecting 1) low-achieving secondary vocational students' academic achievement, and 2) achieving and deep learning approaches, two approaches that may positively interact with each other to produce high quality learning directly. In particular, the results indicated that intervention programs designed to enhance academic self-concept of secondary vocational students may lead to improved achievement and facilitate their achieving and deep level learning approaches to gain more desirable academic outcomes consistently.

Keywords: *learning, academic self-concept, secondary vocational education*

Transition in relationships between Hansen Disease sanatorium residents and their hometown families

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Hansen's Disease (HD) is an infection caused by *Mycobacterium leprae*. This bacillus has the capacity to invade the skin and peripheral nerves, but it is of low pathogenicity and symptoms rarely appear even in those infected. Chemotherapeutic drugs such as Promin have been found to cure the disease. In Japan, HD

sufferers were compulsorily segregated to remote sanatoriums by national policy until 1996 long after a curative method had been established in the 1950s. Most current residents were obliged to live a life in which freedom of movement, career choice, marriage, etc. were legally restricted for over fifty years. They were not free to return home and their family relationships were also restricted because their hometown families had also suffered serious discrimination. This research examines the transition in the relationships between the residents and their hometown families since entering sanatorium until now, as part of applied psychological analyses of the lives of HD sanatorium residents recognized as a social issue in Japan. We adapted a personal interview method. We conducted interviews on 7 residents (age over 70s). We composed seven chronologies of every resident's transition using their autobiographies as necessary. The analysis of chronologies showed the following four points. (1) Although the transition process showed two patterns, the relationships were generally characterized by "unidirectionality," that is, one-way communication from their families to the residents. (2) One pattern is the process from "unidirectionality" through "breakdown" to "reunion," and the other is the process from "unidirectionality" to "acknowledgement inside the family" without "breakdown." (3) The transition to "breakdown" was triggered by their parents' death or their siblings' marriage, and the transition to "reunion" or "acknowledgement" was triggered by social trends regarding the abolishment of the national segregation policy. (4) Both "unidirectionality" and "breakdown" were designed to protect their hometown families. These results suggest that changes both in social surroundings and in family composition are mainly involved in the transition of relationships mentioned above between HD sanatorium residents and their hometown families.

Keywords: *Hansen's Disease (HD), relationships, sanatorium residents, family, transition*

Transport psychology and road traffic safety in Poland

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Psychological tests for drivers have been introduced in Poland by law as an element of preventive action to enhance traffic safety. The aim of the tests is to eliminate those drivers whose psychical condition may influence their behaviour in an improper and dangerous way. Polish law includes the obligation of psychological tests for professional drivers and for drivers who break the traffic law (collecting demerit points), driving under the influence of alcohol, as well as driving instructors and examiners. Psychological tests for drivers verify their predisposition and driving skills, in particular: psychomotor ability, mental ability, and personality. The methodology (i.e. measures of relevant traits in traffic safety) of psychological tests for drivers will be presented. Specific instruments verify psychomotor abilities: reaction time, distance judgment, speed judgment, night and dusk vision, sensitivity to dazzling, visual and motion coordination. Specific paper questionnaires verify mental abilities, personality and temperament traits: intelligence, attention, memory. Driving a car is a task which demands particular competencies including: knowledge, skills and specific mental features. Every driver should possess: knowledge about traffic regulations, vehicle handling, etc, practical skills of driving a vehicle, prediction of traffic situations and, what is especially important, and self-diagnosis ability. This skill determines whether driving style chosen by the driver will be safe. In Poland, the authorities are also looking for the best solutions. Drivers' psychological tests attempt to be one of them, through helping drivers in recognizing the proper and safe way of coping with different situations on the road. Traffic psychologists in Poland cooperate in drivers' education and reeducation programs as well as road safety campaigns. In this respect, the role of transport psychology is to educate young drivers, adults and older road traffic users about safe behaviour in various traffic conditions.

Keywords: *psychological testing, Poland, traffic safety, predisposition, driving skills*

Traumatic brain injury and secondary psychosis

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The relationship between psychotic symptoms and traumatic brain injury (TBI) is unclear, with an estimated prevalence ranging from 0.7% to 9.8%. This dual diagnosis results in significant patient distress and disability, and can complicate broader aspects of rehabilitation. Despite this, our understanding of psychosis following TBI (PFTBI) is poor. Twenty-four papers on PFTBI were reviewed. Studies show a highly variable range of psychosis onset, progression and course. Existing clinical, neurocognitive and localisation data suggested the absence of negative symptoms as a potential diagnostic distinction for PFTBI, revealed common deficiencies in language, verbal memory and verbal learning, and a higher prevalence of frontal and temporal (both left and right) lesions. However, substantial and potentially confounding methodological weaknesses were inherent in the majority of this research. Conceptualisations of the precise relationship between psychosis and TBI, and features of PFTBI, are premature until the considerable methodological limitations shown in the existing literature are addressed in comprehensive and standardised research. We anticipate initiating the first comprehensive investigation of clinical and cognitive/neuropsychological symptoms in PFTBI. Symptom trends that are distinctive of psychosis secondary to TBI may indicate the potential for a separate diagnostic category. Identification of potential risk factors may aid the detection of those at a higher risk for psychosis and allow management strategies to be implemented early, prior to the onset of advanced symptoms.

Keywords: *traumatic brain injury, secondary psychosis, psychosis, rehabilitation, risk factors*

Understanding the psychological reasons behind microblogging

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Microblogging has recently become a new form of communication that is rapidly changing everyone's life. Through services such as Twitter, millions of people can broadcast short messages to their followers via instant messaging, SMS, or web interfaces. However, few studies have been conducted to understand why people want to microblog. In this study, we aim to understand the psychological motivation behind microblogging. We hypothesize that one is more likely to microblog when one has existential anxiety. We recruited 60 undergraduates and randomly assigned them to the control group and experimental group. Existential anxiety was manipulated using the terror management theory where the experimental group was asked to write a short essay about death, whereas the control group was asked to write about dental pain. Then participants were introduced to Twitter and given an account to post a message. They were told that they could use Twitter anytime during the study. The experimenter then told the participant to wait for the next task and left the room. The participant was left alone in the room for three minutes. This was to give participants opportunities to tweet if they want. Then the experimenter asked the participant to perform another two trivial tasks each with a three-minute break afterwards. One task was to slot 20 pictures into 20 envelopes and the other task was to sort the envelopes into three trays according to their colors. During the 3-min break, the experiment posted tweets (such as "helping my friend with her work" "feeling pretty random right now") from an account that the participant was following. This was to let the participant know that there were others online and they could see each other's posts. After the two trivial tasks, we collected all the tweets generated by the participant during the study and ended the study. Our results showed that the experimental group produced significantly more tweets than the control group. This research is the first empirical study that employed a between-subjects design to understand the psychological motivation behind microblogging. Results suggest that people are more likely to microblog when they have existential anxiety.

Keywords: *microblogging, communication, existential anxiety, terror management theory, psychological motivation*

Understanding the social consequences of microblogging

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Microblogging has recently become a new form of communication that is rapidly changing everyone's life. Through services such as Twitter, millions of people can broadcast short messages to their followers via instant messaging, SMS, or web interfaces. However, few studies have been conducted to understand the impact of these emerging phenomena. In this study, we seek to understand the social consequences of microblogging. Further, we want to examine which aspects of microblogging are related to the consequences. We recruited 120 undergraduates and randomly assigned them to one of four groups (29 to 31 participants in each group). Each group was asked to perform a microblogging task at least once a day for a month. The tweet-only group was asked to tweet without reading others' tweets (they did not follow others). The tweet-and-read group was required to post a tweet and read others' tweets (they followed each other). The read-undergrad-only group read the tweets generated by the tweet-only group. The read-nonundergrad-only group read tweets from a pre-selected group of non-undergrad twitter users. We created these groups to understand the consequences of different aspects of microblogging (i.e. regular read-and-tweet, tweet-only, read tweets from people in the same community, and read tweets from people outside one's own community). Participants completed a battery of surveys (including PANAS, subjective well-being, loneliness, communication, and peer attachment scales) before and after the microblogging treatment. Our results showed that after one month, the tweet-and-read group had a higher level of positive affect (measured by PANAS) than the other groups. The tweet-only group, on the other hand, considered themselves having better communication and relationship with their friends (measured by subscales of the Inventory of Parent and Peer Attachment) than the other groups. This research is the first empirical study that employed a between-subjects design to systematically understand the

social consequences of microblogging. Results suggest that both writing and reading microblogs are needed to improve one's affective state. More interestingly, simply writing microblogs is sufficient to make one perceive or experience better communication and relationship with others.

Keywords: *blogging, affect, social consequences, communication*

Upper body reach posture and trajectories prediction in three-dimensional workshop

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Upper body reach posture and trajectories prediction has been one of the focus topics in the field of Human Factors. The existing predictive methods, however, should be improved in prediction accuracy, the attainment of natural posture or trajectories and the real time of a prediction. The present study has adopted new perspectives in this field. In the first, the right arm and torso were specified as an eleven-degrees-of freedom kinematic linkage according to the human body's physiological features. Secondly, the workplace was divided equally into 600 regions. Thirdly, based on real-time longitudinal data collected through three-dimensional motion capture system during the period of the right hand reaching 600 targets in the workplace, the fitting-curve method and the kernel function which stems from self-organization map theory were introduced to predict upper body reach posture and trajectories. The prediction was made in three conditions, namely pointing the target button by natural speed Research i, pointing buttons by high speed Research ii and pushing the target button by natural speed Research iii. On the basis of those results, an upper body reach posture and trajectories prediction computer system was established. This system can be used in the simulation of upper body motion in computer three-dimensional human modeling, and also in ergonomic design evaluation. It was concluded that different parts of the right arm play different roles during the reach motion period; even the actions in different degrees-of-

freedom of the same articulation are distinct. Reach posture and trajectories mainly depend on the target position, however they are also affected by the motion speed and control type. The approach which integrates the workspace, curving fitting method and kernel functions can be used in upper body reach posture and trajectories prediction, and can also be introduced into modeling the motion of other body parts. The established upper body reach posture and trajectories prediction computer system can satisfy the ergonomic design and evaluation due to its accuracy, naturalness and real-time prediction.

Keywords: upper body reach posture, trajectories prediction, three-dimensional human modeling, ergonomic design evaluation, human factors

Using unimodal and bimodal congruence effects to assess neural connectivity in individuals with mild autistic traits

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The aim of the project was to examine the assertion that the cognitive profile of autism can be attributed to impaired neural connectivity between distant brain regions. Participants were undergraduate students, selected for either high or low scores on the Autism Spectrum Quotient (AQ). The study employed (a) a bimodal discrimination condition in which participants classified visual stimuli as either high or low on the screen, while instructed to ignore concurrently presented high and low pitched tones, and (b) a unimodal discrimination condition in which participants classified stimuli as high or low on the screen, while instructed to ignore arrow-heads attached to the critical visual stimulus elements. A congruence effect for the bimodal condition (that is, faster response times for high positioned lines paired with high pitched auditory tones or low positioned lines paired with low pitched tones, relative to the alternative stimulus pairings) should reflect long-range neural connectivity, whereas such an effect for the unimodal condition (that is, faster response times for arrows pointing up positioned high on the screen, or arrows pointing down positioned low on the screen, relative to alternative pairings) should involve

short-range neural connections. High and Low AQ groups showed a similar magnitude of congruence effect in both the unimodal and bimodal conditions of the discrimination task. Three alternative explanations of the results are: (1) Neural underconnectivity is not a pervasive feature of the autistic brain; rather, it is specific to particular neural regions (for example, the frontal lobes). Thus, limitations of underconnectivity may be more pronounced when tasks involve integrating information between the frontal lobes and other neural regions; (2) Greater symptom severity is related to more extensive underconnectivity in individuals with autism, with individuals with high-functioning autism less affected by neural underconnectivity; and (3) The 'fractionable' behavioural traits in autism are underpinned by distinct and potentially separable neurological mechanisms.

Keywords: Autism Spectrum Quotient, cognitive profile of autism, neural connectivity, discrimination task, fractionable behavioural traits

Validation of the anger rumination scale

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Anger rumination is an inevitable and repetitive cognitive process which occurs during anger experience, continues after anger experience, and increases the duration of anger. Anger rumination has been associated with a wide range of psychological disorders, especially emotional disturbances. The main purpose of this study was to examine the reliability and validity of the Anger Rumination Scale (ARS). Three hundred and eighty four students from the University of Tehran (211 females, 173 males) were included in this study. All participants were asked to complete the ARS, the Tehran Multidimensional Anger Scale (TMAS), and the Mental Health Inventory (MHI). Test-retest reliability and internal consistency of the ARS were evidenced at satisfactory levels. Content validity of the ARS was calculated according to Kendall's coefficients of concordance for ARS subscales including Angry Afterthoughts, Thoughts of Revenge, Angry Memories, and Understanding of Causes as well as ARS total score. All Kendall's coefficients of

concordance were statistically significant. The convergent and discriminant validity of the ARS were supported by an expected pattern of correlations between the ARS and the measures of trait-anger, state-anger and, anger-in, anger-out, anger-control in, anger-control out, psychological well-being, and psychological distress. It was concluded that the ARS is a reliable and valid scale for measuring anger rumination.

Keywords: *Anger Rumination Scale (ARS), validity, reliability*

Validity of computer-assisted health assessment of elderly adults using visual analogue scales and face scales

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Aims of this study were to compare personal computer (PC) administered versions of the visual analogue scale (VAS) and the face scale (FS) and to verify the validity of these scales for use with elderly adults. PC versions of VAS, FS, and the Japanese version of the Perceived Stress Scale (JPSS) were developed. The VAS and FS comprise 3 items: (1) generic quality of life (QOL), (2) health status, and (3) stress. In 2006, 293 participants (105 males and 188 females; 180 younger adults under 60 years of age and 99 older adults) completed the PC versions of VAS, FS and the JPSS, as well as the paper-and-pencil versions of VAS, FS, and the 8-Item Short-Form Health Survey (SF-8). The older group had higher generic QOL and lower stress scores. In the younger group, the degree of agreement for all intra-class correlation coefficients (ICC) between PC and paper-and-pencil versions was over 0.7, whereas in the older group the ICC for the stress item of VAS was under 0.5. In the younger group, all correlation coefficients between VAS and FS were over 0.6, whereas in the older group, they were under 0.5 with the exception of health status. In the younger group, correlation coefficients between the JPSS and stress items of VAS and FS; and between the mental component summary (MCS) of the SF-8

and stress items were over 0.5, whereas in the older group, the stress item of VAS was only weakly correlated with the JPSS and not significantly correlated with the MCS. In the case of younger adults, the PC versions of VAS and FS were strongly correlated with paper-and-pencil versions and therefore, computer-assisted data collection was valid for this group. The results for elderly people, however, suggest that the PC versions of VAS and FS did not have sufficient validity, especially with regard to the stress items. Moreover, the conceptual validity of the scales could not be verified. It is suggested that further investigations are needed to improve the PC scales for aged respondents and to develop better explanations for them.

Keywords: *Visual analogue scale (VAS), face scale, validity, elderly people, computers*

Validity of the basic assumption underlying the comparison question technique (CQT)

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Comparison Question Technique (CQT) is based on the basic assumption that psychophysiological responses vary depending on whether the subject receives a relevant or a comparison question and whether the subject is motivated to tell a lie or the truth. One of the major criticisms against CQT to detect lies is that even an innocent subject would show great physiological reactions to a relevant question as compared to the reactions to a comparison question. "Pretest interview" is purported to condition the subject's psychological state that may insure the assumed physiological reactions upon receiving the respective questions given in the main test. The present study examined whether the pretest interview helps achieve its assumed purpose of accelerating innocent subjects' physiological reactions to a comparison question. Subjects were instructed to complete a computer maze game within a predetermined time and were promised a substantial amount of money upon succeeding and abiding by all rules. After the game was completed, the experimenter accused the subject of cheating while playing the game and suggested they take a polygraph test in order to receive the promised

money. The subjects in the experimental group were subjected to a standard pretest interview for CQT before taking the main polygraph test examined by an expert. The subjects in the control group were subjected to a modified pretest interview. The subjects also rated the amount of pressure felt while answering the relevant and comparison questions given during the test. The subjects in the experimental group showed greater physiological reactions to the comparison question than to the relevant question and felt higher pressure by the comparison question than by the relevant question. On the other hand, the subjects in the control group did not significantly differ between the comparison and relevant question. Thus, the standard pretest interview for the CQT was effective in accelerating innocent subjects' physiological reactions to the comparison question relative to his/her reactions to the relevant question. This result supports the assumption that, in CQT tests, after the standard pretest interview, innocent subjects would experience more emotional arousal by a comparison question than by a relevant question.

Keywords: *comparison question technique, physiological reactions, pretest interview, polygraph test, relevant question*

Validity of the Global competence inventory: Ipsative method

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This study was intended to examine the validity of the Global Competence Inventory developed using an ipsative method. The preliminary global competence inventory had 18 competencies and 20 items for each competence, making the total of items 360. The inventory was administered to 89 employees working in a global company in Korea and asked them to rate the importance of each item in working overseas. Half of them had overseas working experience. There were not significant differences in the rating scores of each of the 20 competencies between the two groups. Considering means and standard deviations for each of the 20 competencies, the total of 15

items for each competence were selected. Based on the importance scores, a total of 67 sets were developed. Each set consisted of four different competence items. This inventory was administered to a total of 67 employees working in a global company in Korea. They were asked to select the most appropriate item as well as the least appropriate item for themselves. These employees consisted of four different groups separated by overseas experience as well as the level of performance appraisal scores. The inventory scores were compared to the performance appraisal scores. The results showed that generally, means for each of the 18 competencies were different across four different groups, suggesting that the ipsative method reduces faking effect. Also, the results showed that the high performance group with overseas working experience had higher scores in task-related competencies such as decision making, creativity, leadership, and passion whereas they had lower scores in relation-related competencies such as acceptance of different culture, negotiation, and consilience. These results appear to support criterion-related validity of the Global Competence Inventory. The Global Competence Inventory has criterion-related validity. Also the ipsative method appears to reduce faking effect.

Keywords: *faking, global competence, overseas working, ipsative method*

Verbalizing the model's performance in microcounseling: Facilitation of the acquisition of counseling skills by the use of modeling

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Microcounseling is a method for training in counseling skills. Training of microcounseling consists of instruction, modeling, exercise, and feedback. The aim of this study was to investigate the effect of verbalizing the model's performance in modeling. Paraphrasing, one of the micro skills was used to index the acquisition of counseling skills. It was expected that verbalization of the model's behavior would improve the acquisition of counseling skills compared with no verbalization. Thirty-five undergraduate students were randomly

assigned to either the verbalization group ($n=18$) or the non-verbalization control group ($n=17$). The pre, post, and follow-up (one week from post test) tests were performed in order to examine the variation of paraphrasing scores. Modeling was practiced after the pre test. In modeling, participants of the verbalization group were asked to report the contents of the model's behavior. Participants of the control group observed the model's performance without verbalization. The scores of paraphrasing for each group in pre, post, and follow-up tests were calculated. From the pre test to the post test, both groups obtained the performance gain. However, the verbalization group showed a higher performance gain than the control group. The verbalization group performance remained at the same level from the post test to the follow-up test. The control group showed performance loss from the post test to the follow-up test, although the follow-up test score was higher than the pre test score. These findings suggest that verbalization of the model's performance improves the acquisition and the maintenance of the counseling skills. The conclusion of this study is that verbalizing the model's performance in microcounseling modeling promotes more effective acquisition of the counseling skills.

Keywords: *microcounseling, counselling skills, microcounseling modeling, verbalization*

Viewers' impressions of internet advertisements: An analysis of viewer perception toward the advertising of green tea beverages

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In recent years, the internet has become immensely popular and internet advertising is increasing drastically. However, internet advertising is still at a stage where it is difficult to acquire systematic information on the kind of expressions that are effective for advertising on the internet. This study aimed to clarify the advertising approach on the internet that is highly effective, by conducting an audience rating survey in a natural setting of web browsing. Eighty five participants were asked to evaluate the advertisement homepages of three

Japanese green tea beverages. Specifically, the participants were asked to browse through the individual websites built for advertising the three brands, then they were asked to write an essay on their impression about the websites in 100 characters and rate the attractiveness of the advertisement and the purchase intention on 7-point scales. Text mining was performed to extract the frequency distribution of the "main words" from the free-description responses. Some of the commonly used nouns were "game," "materials," "trivia," "quiz," "tea leaves," "simplicity," "top pages," "green," and "characters." Furthermore, correspondence analysis revealed the relationship of these "main words" and the degree to which the participants had a favorable impression of, and were attracted to, the homepages. In the free-description answers, the participants described the contents of the websites using many words like "game" and "quiz," which they considered to be the characteristic features of the interactive media. It is believed that these features influenced the degree to which the participants had a favorable impression of, and were attracted to, the websites.

Keywords: *internet, advertising, viewer perception, websites, Japan*

Violence risk assessment: A prospective study in Taiwan

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One of the important topics in forensic psychology is the violent behavior of persons with mental disorders. Violence risk assessment is helpful in court sentencing or discharge of psychiatric inpatients. In 2005, a new violence risk assessment instrument called the Classification of Violence Risk (COVR) was published in the United States. The goal of this study is to investigate the utilization of the COVR and the predictors of violence of psychiatric patients in Taiwan. Sixty eight psychiatric inpatients were recruited from northern Taiwan, and the COVR and Brief Psychiatric Rating Scale (BPRS) were administered to each participant. The participants and their collaterals were interviewed at the 10th and 20th week after discharge, collecting data on the violent

behavior of the participants. Results indicated that the COVR possessed good inter-rater reliability ($\kappa = .932\sim.974$), but its validity was not supported significantly in statistics. When age, sex, number of hospitalizations, BPRS score, and Global Assessment of Functioning (GAF) score were controlled, it was statistically significant that patients with schizophrenia had more violent acts compared to those with mood disorders. Results seemed to support the hypothesis that patients with psychotic disorders were more violent than those with mood disorders. However, as the sample size was small, more research is needed to clarify the validity of using the COVR in Taiwan. In addition, future research might investigate the comparison of violence between patients with bipolar disorders and depressive disorders.

Keywords: violence, classification of violence risk, forensic psychology, psychotic disorders, mood disorders

Virtual aquarium could not substitute for a real one

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The recent progress in digital electric devices has been remarkable. This trend has been also exceptional in interior goods which make our life soothing and cheerful. A virtual aquarium (VA) was one of such goods developed for this purpose. However, it has not been clarified if a VA can substitute for a real aquarium (RA). The purpose of this research was to determine whether a VA has the same effect as a RA or not. A NEC Uo-Hyakkei, with a 25 inch Braun-tube monitor was used as a VA. The content of presentation comprised of 6 angelfish, 15 false raminose tetras and some types of plants. The presenting (viewable) face, however, was only in front. The RA was almost the same size (26 inches) as the VA, but the content of the RA could be observed through three faces. The content of the RA comprised of 5 white angelfish, 3 siamese algae-eaters, 3 otocinclus and some types of plants. Either aquarium was placed in the corridor by an entrance of a classroom. Subjects were 34 students of a lecture class at this room. One of the aquariums was exhibited in turn and the schedule was as

follows: none (phase I: 4 weeks), VA (II: 4 weeks), RA (III: 4 weeks) and VA (IV: 2 weeks). The behaviors of the subjects were monitored through security camera and analyzed for their concerns toward both aquariums. The number of students casting their eyes on the aquarium, and their stopping times in front of the aquarium, were used as indexes for representing their concern towards the aquariums. In the first week of phase II, introducing VA firstly, both indexes showed very high scores. But, as the presentation passed for four weeks, both numbers decreased. In contrast in phase III, first high scores continued to the end. This high concern with the RA, however, did not continue with VA in phase IV. These results showed that although VA attracted the students' eyes on first encounter, the attraction faded soon. In contrast, RA continued to attract them till the end of the phase. These findings might show that a VA is not a substitute for a RA.

Keywords: virtual aquarium (VA), real aquarium (RA), students

Visual guidance and expertise motor response in spinning baton catching

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The aim of this preliminary study was to examine the difference between motor response and visual cues of experts and novices. Baton twirling is a sport that requires years of training for manipulation of the baton. It is expected that spinning baton catching requires the accurate motor control of hand movement guided by the visual cues of baton trajectory. The motor and perceptual response of baton catching, especially when baton is spinning, should be different from that of ball catching (Takahashi et al., in press). Takahashi et al. (2007) reported that experts in baton twirling visual search behavior gaze on the center region of baton. Former studies on motor learning showed that reaction time for specific tasks are gradually changed by practice (Schmidt, 1991). This study focused on comparing the motor and perceptual response time among experts and novices. Two expert baton twirler and two novices participated this study. Tasks were to catch the

baton in an imaginary circle (perpendicular = 50 cm) with their right hand. A baton was thrown with spin by one expert baton twirler to participants (distance = 4 m) in their sagittal plane. The tasks were repeated until the number of successful catches had reached 10 trials per each participant. Their catching hand movements and the baton flight were measured by using 3D auto motion analysis system (Motion Analysis Inc., Santa Rosa, CA) with six cameras at 180 Hz. Their eye movements were monitored during the execution of each task, by using an eye tracking system (EMR-8, nac, Japan). Their response time of initial hand and gaze on the center region of baton were analyzed by using collected data. The response time of eye and hand movement of experts were 326.9 ± 128.2 and 421.3 ± 93.2 ms, respectively. Those of novices were 171.1 ± 155.1 and 26.1 ± 97.5 ms, respectively. More analysis is now in progress (the number of individuals for both expert and novice groups has been increased to 10). In the presentation, the stability in expertise motor and perceptual response in baton catching will be discussed.

Keywords: *motor response, visual cues, experts, novices, baton twirling*

Visuospatial memory in preclinical Huntington's disease

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Detecting possible preclinical manifestations of Huntington's disease (HD) is still a controversial issue. Manifest HD has been associated with impairment in visuospatial memory. However, it is still unknown how nonverbal memory is affected in the preclinical phase of HD. The aim of this study is to study visuospatial memory in preclinical HD. Participants ($n=70$) were recruited through a predictive testing program for HD. The number of CAG repeats in the expanded allele and current age were entered into a regression equation to calculate Predicted Years To Onset (PYTO) of HD. Based on genetic information and median split of PYTO, three groups were formed: carriers with less than 12 years to disease onset (PYTO<12); carriers with

12 or more years to disease onset (PYTO \geq 12); and noncarriers (NONCARRIERS). Three neuropsychological tests were used to examine visuospatial ability and memory: Rey-Osterrieth Complex Figure Test, copy and recall after three minutes; Corsi Block-tapping Test; and an experimental spatial test where the participants had to memorize the position of 20 objects in a room and relocate them after two minutes delay. All three tests were administered to all participants individually, in the same order. The PYTO<12 group located significantly fewer objects correctly on the spatial test and scored significantly lower on the Corsi Block-tapping Test than the NONCARRIERS group, indicating spatial deficits. No significant differences were found on the Rey Complex Figure Test, or between the PYTO<12 and the PYTO \geq 12 groups or the PYTO \geq 12 and the NONCARRIERS groups. The present results suggest that visuospatial episodic memory and working memory are impaired in the preclinical phase of HD before appearance of motor symptoms and diagnosis. These impairments are associated with visual-spatial and three-dimensional object location, but not with visual object cognition, in the carriers with less than 12 estimated years to disease onset. The results suggest not only early dysfunctions in the dorsal caudate nucleus and the putamen, but also in cortico-striatal circuits between the striatum, prefrontal cortex, and parietal lobe.

Keywords: *Huntington's disease, visuospatial memory, nonverbal memory, preclinical Huntington's disease, motor symptoms*

What keeps from taking active behaviors in environmental issues in their daily life in Japan?

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Environmental problems are now universal, and the youth need to think of it as their own problem, and do anything practical, themselves, for their world and for their future. Therefore, it is more important to have a sense of public-spirit and we-feelings, but the Cabinet Office in

Japan (2009) suggested that in a questionnaire, individuals in the age of twenties have a strong orientation toward individualism. This study investigated the public spirit, group consciousness and some attitudes about social issues and environmental problems, et cetera. and analyzed what keeps the youth from showing positive behaviors in environmental issues. The subjects are 101 university students, and the method used was a questionnaire. The main factors considered are public spirit, concern about social issues, crisis perception about environmental problems, subjective effectiveness to do ecological movement by oneself, and ecology behaviors in seven areas. The results are as follows. University students' group consciousness in their community is low, but ones in their country and world, and their public spirits are high. 95% of them have some concerns about today's environmental problem. In crisis perception, 86.1% perceive these as pressing matters and 81.2% perceive it as getting serious. Those with low concerns about social issues generally have lower concerns about environmental issues than those with high social concern ($t=2.78$, $df=99$, $p<.01$). Those with low concerns about environmental issues have a lower crisis perception of environmental issues ($t = 2.32$, $df = 92$, $p <.05$) and feel more helpless in performing ecological behaviors by oneself ($t = 3.16$, $df = 89$, $p <.01$) than those with high environmental concerns. Those with low environmental concerns do not take more positive action across seven environmental areas, than those with high environmental concerns ($F = 7.98$, $df = 1.98$, $p <.01$). When separating the trash they act positively, but in wearing warm or cool clothes without using air conditioners, they don't act positively. To conclude, the difference of ecology behaviors in private and public spaces was investigated. The effects of the way of setting up spaces was suggested. Ideas for everyone to urge positive actions in environmental issues was discussed using the described data.

Keywords: *ecology behaviours, environmental issues, public spirit, group consciousness, Japanese*

**What makes children suggestible?
Examining the relative contributions of
linguistic, pragmatic, metacognitive and
social/contextual factors**

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This study aimed to examine the impact of and interactions between linguistic, metacognitive, pragmatic and social/contextual factors, on suggestibility in child eyewitnesses. 112 early elementary school children completed the Video Suggestibility Scale for Children (Scullin & Ceci, 2001), in which misleading questions about a video they had viewed previously were asked, and then repeated following either positive or mild negative feedback. A fresh set of questions were then asked and repeated in the same manner. Children were also tested on pragmatic ability, language ability (syntactic and semantic) and metacognitive ability (calibration of confidence judgments), as well as memory for the video (free recall). While all pragmatic measures showed developmental trends, they did not all appear to tap a single underlying competence. This was reflected in the correlations between the measures, in particular in the correlations between the pragmatic measures and responses to the repeated questions vignettes. The newly developed measures showed good internal consistency and proved engaging to the children. Implications for forensic contexts are discussed. In regards to yielding to initial questions, after controlling for age, lower yielding was associated with both higher language ability (in the second set of questions), and superior calibration performance. Neither pragmatic ability nor memory trace strength (free recall) predicted yielding. In regards to shifting to repeat questions, contrary to expectation, better language ability was associated with more frequent shifting. As expected, better calibration was associated with less shifting, at least in the first set of questions, and there was a borderline negative association between pragmatic ability and shifting. Strength of memory trace did not predict shifting. Although negative feedback elicited markedly more shifting than positive feedback, it did not impact on the association between individual difference factors and shifting. There were no significant interactions between predictors. The results provide some evidence that individual differences in children's pragmatic, language and metacognitive abilities

can provide protection from suggestibility. Although pragmatic ability did not appear to protect children from yielding to misleading questions, it was associated with decreased vulnerability to shifting when those questions were repeated. By contrast, greater general language competence was associated with reduced vulnerability to yielding, but increased vulnerability to shifting. Superior calibration was associated with reduction in both yielding and shifting. Memory trace strength showed no predictive power. Importantly, we found no evidence that metacognitive, memorial and social factors interacted to influence suggestibility, and no evidence of age differences in the effect of these factors on suggestibility. Forensic implications are considered.

Keywords: *child eyewitnesses, meta-cognition, language, suggestibility, pragmatic ability*

What protects migrant children from social maladjustment in China

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Migration is a complex experience for rural children who have to move with their parents to the city in China. Many researchers indicated that migrant children have negative consequences in their mean level of psychosocial development compared to their urban partners. Positive adjustment in migration children has received relatively little attention. Therefore, this paper aims to reveal the positive adjustment and key protective factors for migrant children. In this research, 693 migrant children are contrasted with 345 urban students. Three domains of social adjustment (including behavioral, academic and real-life satisfaction variables), and prospective protective factors (such as personal and parental variables) have been examined with self-administered questionnaires. Based on the literature review, the author operationally defined "positive adjustment" as having higher scores in social adjustment variables than that of contrasted urban partners in each domain. The results indicated that nearly half of the migrant children have positive developmental results in at least one domain, and at least a quarter of the target

participants are well adjusted in each domain. Logistic regression revealed that personal mastery is the common key protective factor in all domains and that there are specific protective factors associated with different domains. So, this result argued that the migrant children are not a risk population as a whole. There are domain-universal and domain-specific protective factors in social adjustment.

Keywords: *migrants, children's adjustment, psychosocial development, personal mastery, protective factors for migrant children*

What romance stories tell us about love? A content analysis on couple intimacy in popular Chinese romance novels

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Research studies have indicated the impact of reading romance novels on people's expectations of relationships, gender roles, and beliefs on intimacy. This study examined what messages romance stories convey on intimacy. Content analyses were conducted on the texts of four representative Chinese romance novels by a popular Chinese romance novelist Qiong-Yao. Four aspects of intimacy were examined in the novel characters' intimate interactions: the bonding process between couples, intimate conflicts and their resolution strategies, gender roles and their beliefs about love. Results show (1) not only his/her appearance, but also if he/she treats your family members properly and considerably, can touch a lover's heart; (2) Conflict resolutions between couples are often initiated by others (e.g., parents); (3) Conflicts are often dissolved in dramatic, mystical processes, in which both couples participate passively and contribute little; (4) Gender roles are predictably stereotyped, more so on male characters than on females; (5) Themes of many stories convey a belief of karma (predictable results due to external, uncontrollable causes, regardless the intimate process per se), leading to a passive attitude toward intimacy management. Messages abstracted from romance novels can motivate readers toward external, unstable attribution in intimate relationships. Applications of these popular romance cultural messages for gender education and couple counseling are proposed.

Keywords: *romance novel, intimacy, couples therapy, gender roles, conflict resolution*

What's the ideal leader? Managers' visions in three different European countries

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Following the previous research titled "The Effectiveness of Leadership - the feedback of direct report subordinates as an element of comparison and improvement for the manager" (Pellegrini M. et al.) presented in the recent international congress of Berlin 20-25 July 2008, we decided to delve into this topic by analyzing all data at our disposal. The aim of this research (in a cross-country prospective) is to explore, in great detail, the perceptions of managers concerning what they recognize as the ideal leadership style. The sample consists of a group of 600 European workers and their 100 managers, working in 42 European companies in various sectors (industry, distribution, energy, finance, service, and food). The survey instrument is an on-line questionnaire (126 items) on Leadership-style Grid feedback 360° (Blake and Mouton - Managerial Grid Model). The main focus is on managers and their ideal vision of the most effective leadership style, with comparisons in three different cultural contexts (Italy, Germany and Czech Republic). Analysis of data, by using the non-parametrical method Kruskal Wallis, highlights significant differences between the three groups on the perception of the ideal leadership style, in particular on 9.9 style ($\chi^2(2) = 7.123$; $p < 0.05$ Post hoc analysis $p_{\text{global}} = 0.05/3 = 0.017$; Bonferroni's correction). We notice that the ideal leader for German managers is oriented towards 9.9 style ($m_r(D) = 59.59$), more than Italian managers' ideal ($m_r(I) = 50.13$) and Czech managers' ideal ($m_r(CZ) = 41.73$). We can highlight, in addition, significant differences on 9.1 style ($\chi^2(2) = 14.744$; $p < 0.01$ Post hoc analysis $p_{\text{global}} = 0.01/3 = 0.003$ Bonferroni's correction) as the ideal leader for Italian managers ($m_r(I) = 60.47$) is more results-oriented than the ideal leader for German managers ($m_r(D) = 40.34$). We can also highlight that the ideal leader for Czech managers ($m_r(CZ)$

= 60.71) differs from the German ideal ($m_r(D) = 44.71$) on 5.5 style ($\chi^2(2) = 12.428$; $p < 0.01$ Post hoc analysis $p_{\text{global}} = 0.01/3 = 0.003$ Bonferroni's correction). Last of all, European managers (German in particular) are ideally 9.9 oriented (M-Italian = 85,33; M-German = 89,94; M- Czech = 77,65). Italian managers have a concept of the ideal leader being a little more oriented to results and control of their employees (9.1 style). The Ideal leader for Czech managers has a preference for compromise and balance (5.5 style).

Keywords: *leadership effectiveness, ideal leader, managerial grid model, management*

Why do individuals who score high on psychopathic traits fail to respond appropriately to cues of distress in others?

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Individuals with psychopathic tendencies (namely those who score high on callous-unemotional traits) fail to respond appropriately to signs of distress in others (e.g. sad and fearful faces) and this is thought to contribute to the high levels of aggression in these individuals. However, the underlying mechanisms of this deficit remain unclear. We aim to determine if this failure is due to an inability to recognise signs of distress or whether these signs are recognised but do not lead to an inhibition of aggression (i.e. the Violence Inhibition Mechanism is dysfunctional). Participants compete in a competitive computer game against a simulated opponent. During the game, the participant has the opportunity to blast their opponent with a loud noise, the intensity of which provides a measure of aggression. This paradigm is used to study the effect of expressions of fear on the level of aggression displayed. Based on previous research, it is hypothesised that individuals with psychopathic tendencies will not be inhibited in their aggressive behaviour in condition 1, however in condition 2, the increase in the salience of the opponents distress will lead to a reduction in aggressive behaviour. Preliminary results will be reported. We anticipate that increasing the

salience of the opponent's distress leads to an inhibition of aggressive behaviour in individuals with psychopathic tendencies, suggesting a deficit in the attention and processing of emotional cues in their environment. However, if participants fail to respond to signs of fear, this suggests that the Violence Inhibition Mechanism is dysfunctional. The findings of this research will clarify why it is that psychopathic individuals fail to respond appropriately to signs of distress in others. Further this research will test some of the predictions made by a widely cited model of aggressive behaviour in psychopathic individuals, The Violence Inhibition Mechanism Model. The implications of this research will be applicable to intervention strategies tailored for this subset of the population, such as training these individuals to focus on and be more alert to the emotional signals of others.

Keywords: *psychopathic traits, emotion recognition, aggression, violence inhibition mechanism model, interventions*

Why migrant workers want to leave? The importance of industrial work adaptation

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Most industrial workers in China's manufacturing industry come from rural areas, and high turnover rate of these migrant workers has seriously impacted organizational performance. Based on the person-environment fit theory, we believe that whether migrant workers adapt to repetitive and intensive work in mass production (industrial work adaptation) is one of the crucial factors leading to turnover intention. In order to empirically measure this effect, we developed the Industrial Work Adaptation Scale (IWAS). We conducted two studies. In study 1, we generated 16 scale items from the existing literature on person-environment fit, industrialization and related constructs. The scale was administered to 582 migrant workers of a large manufacturing company located in southern China. Study 2 tested the scale using a new sample and tried to determine the mechanism between industrial

work adaption and turnover, which is supposed to be job burnout. In study 1, we conducted exploratory factor analysis and confirmatory factor analysis, which resulted in a 7-item scale. IWAS was demonstrated to have acceptable psychometric properties; evidence of convergent, discriminant, and incremental validity was provided. IWAS was strongly related with job satisfaction, organizational commitment, organizational justice, perceived supervisor support and in particular, turnover intention. Study 2 further validated the psychometric properties of IWAS. Industrial work adaption predicted turnover intention ($\beta = -0.072$, $p < .01$), and especially burnout ($\beta = -0.041$, $p < .01$), which mediated the relationship between industrial work adaption and turnover intention ($\Delta R^2 = 0.088$, $p < .01$). Overall, the present studies suggest that the Industrial Work Adaptation Scale is a reliable and valid measure. These studies expand the comprehensiveness of the current research on high turnover rates of industrial workers. Theoretical implications of the IWAS are discussed.

Keywords: *Industrial work adaptation scale (IWAS), person-environment fit, job burnout, manufacturing, migrants*

'Will you be my child again?' The meaning of giving birth to another child to parents who lost their child in a traumatic accident

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The aim of this study was to explore the grief adjusting process of parents who lost their child in a traumatic accident, and how they construe the birth of a newborn child. Authors of this research worked with 3 pairs of parents with kindergarten children who died in a car accident in Taiwan in 1999. The parents were traced for ten years worth of relevant documents including news reports, working records, field notes of social workers, and interviews of these parents, in order to conduct a qualitative analysis of each case study. Results revealed that (a) giving birth to another child was often construed as an attempt to "get the lost child back" by these

parents, with or without planning the birth; (2) the newborn comforted these parents by engaging them with child bearing and having hope again for its future, nevertheless its effect on mitigating parent's grief varied between and within families; and (3) parents show apparent transference and over-protection parenting toward the newborn. To conclude, (1) these parents can benefit from other's empathic acceptance for their attempt to give birth to another child; (2) reflecting on their grief process can facilitate adjustment of these parents; and (3) it is a useful reminder for these parents to be aware of their parenting, in order to avoid over protection of their newborn child.

Keywords: *grief adjustment process, parents, trauma, qualitative, case study*

Women and stress: Psychoneuroimmunology and the role of vitamin supplementation

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A possible mechanism linking chronic stress, immune dysfunction, and disease has been termed the Oxidative Model, referring to the oxidative imbalance of cells associated with antioxidant status and psychological distress. The current study applies this model to determine whether taking supplements targeted at people experiencing chronic stress can prevent the depletion of nutrients required for effective immune function. Improvements in psychological and physiological wellbeing were explored using a Randomised Control Trial (RCT) including a supplement designed to decrease the physical impact of stress (active) and a placebo group (control). A sample of 60 general population women experiencing chronic psychological distress was employed. Psychological parameters included distress, coping styles, anger expression, loneliness, anger expression, family relations, and the State-Trait Personality Inventory. Based on previous research, biochemical parameters included 5'-ectonucleotidase (NT), Homocysteine (HCY), Tissue Ascorbate (VITC), and C - Reactive Protein

(CRP). Specific to this study, biomarkers Cholesterol (CHOL), Total Antioxidant Status (TAS), Lipid Oxidation (LO), Folate (FOLATE), Vitamin B12 (VITB12), and inflammatory cytokines (IL-1 β , IL-5, IL-6, IFN- γ , TNF- α , TNF- β , and IL-10) were also assessed. Allocation to the active group was linked to significantly increased FOLATE ($p = .000$, $\eta^2 = .27$) and VITB12 ($p = .01$, $\eta^2 = .16$) levels. A Wilcoxon Signed Rank Test revealed a statistically significant decrease in inflammatory cytokine levels in the active group: IL-1 ($p = .01$, $\eta^2 = .40$), TNF- α ($p = .02$, $\eta^2 = .40$) and TNF- β ($p = .003$, $\eta^2 = .42$). Improvements in physiological status for NT ($p = .02$, $\eta^2 = .14$) and HCY ($p = .01$, $\eta^2 = .16$) were observed for all participants across the trial. Conversely an increase in LO ($p = .003$, $\eta^2 = .18$) was seen. Exposure to vitamins at times of psychological distress did not conclusively improve physiological or psychological wellbeing by the mechanisms proposed by the Oxidative Model. However levels of inflammation decreased for those randomized to the active group. Future research using this model would benefit from employing a more homogenous chronic stress sample, improved sensitivity, and/or specificity of a screening tool for psychological distress. More research into therapeutic levels of nutrient supplementation is required.

Keywords: *nutrient supplementation, chronic stress, immune dysfunction, oxidative model, well-being*

Women's conflicted views towards gender roles in contemporary Japanese society

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In recent years, while an increasing number of people tend to show a desire to take part in performing both paid work and household work, in reality men spend most of their time in paid work and women mainly spend time in both paid work and household work. This situation shows that there is a gap between their views and practices in dividing family work. In order to understand how people's expressed views are not practiced, the purpose of the present study was to grasp how people view the gender roles. Semi-structured interviews with three unmarried women with no prior work

experience were conducted to gain data. The interviews started by asking the question “What do you think gender equality is?”, and asked the participants about their experiences and views in terms of gender issues and of the roles in their family. The discussion in the interviews was about their individual experience of gender, the division of family work for the parents, the views towards roles in their own future family and general views to gender issue in society. Results from the analysed text data was that there were multiple voices that were not necessarily consistent each other in and across contexts, even in the one participant. The voice representing the hope of being with their children conflicted with the voice representing their view of busy paid work, for example. In addition, while in the context of their own family work or society, the participants tend to express the disagreement with the pattern of gender roles dictating that “men have paid work and women do household work”, the gender division of family work for parents was normal and likely to be comfortable for them. Considering the fact that each participant had both of experiences or views supporting gender roles and not supporting gender roles, it is thought that the participants possibly make decisions for either following the gender roles or not following gender roles.

Keywords: *family work, gender roles, gender equality, paid work, household work*

Work and home demands and satisfaction: A work-life balance model

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In achieving satisfaction with work and home life, work-life balance strategies are used. The aim of this study was to test a work life balance model using the data drawn from Romanian office workers and structural equation modeling. We assumed that the condition of high work, respectively home demands, would be associated with low levels of control over work, respectively job demands and low perceived work and home social support, satisfaction with work, respectively home and work life balance become low. The data is to be collected from

approximately 200 respondents. When work life balance is low (low satisfaction with balance and low work-life balance skills), anxiety and depression levels are probably increasing. Low work, respectively home control over tasks and low work, respectively home perceived social support probably associates positively with low levels of using work-home adaptive strategies and low satisfaction with work and home. We assume that control and social support from work and home, together with work-home adaptive boundary strategies, enhance work, respectively home satisfaction that, in their turn enhance the formation of work-life balance skill, which associates negatively with low levels of general mental health. All hypotheses will be tested using quantitative methods. The questionnaires are validated using the parallel blind technique. The snowball technique is used as sampling method. Half of the sample will receive the set of questions regarding work (demands, control, support, satisfaction) to complete first; the other half will receive the set of items measuring home (demands, control, support, satisfaction). These findings will be discussed in relation to the formulation of a work-life balance model of work and home demands and satisfaction.

Keywords: *work-life balance, work demands, home demands, satisfaction, Romania*

Work motivation and desirable and undesirable personality traits according to Indian students and employees

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The last few years have seen a salient increase in trade relations between Australia and India (Hebbani, 2008). India is Australia's fastest growing major export market and investments between Australia and India are also increasing (Rudd, 2008). India is a lucrative market as it has a growing middle class of 300 million people with a growing purchasing power of approximately 85 billion Australian dollars (Harcourt, 2007). As trade relations between Australia and India are on the rise, understanding what motivates Indians and what they consider desirable and undesirable personality characteristics will provide a

competitive edge to organizations in Australia looking to enter the Indian market. In order to gain a richer and better understanding of what motivates Indian students and employees and what according to them are desirable and undesirable personality characteristics, semi-structured interviews were conducted. The interviews were recorded on a voice recorder and later transcribed into text. The interviews were then content analyzed. Results revealed that Indian students were motivated to study for their future careers and family expectations, whereas Indian employees were motivated at work by several factors such as money for survival and to provide for their families. Some of the personality characteristics considered desirable by Indian employees were conscientiousness and humility, whereas Indian students thought being friendly and respectful of teachers were desirable characteristics. Some of the personality characteristics considered undesirable by Indian employees were being political and arrogance, whereas the students felt that some of the undesirable characteristics were laziness and disobedience. It is hoped the findings of the present study will have practical implications for both Australian organizations in India and Indian organizations in terms of selection, training, development and compensation.

Keywords: *trade relations, organizational competitive edge, organizational selection, organizational training, compensation*

Working memory capacity and individual differences in empathy

YOSHIDA, A. (Tohoku Fukushi University)

What is the origin of individual differences in empathic concern? Although the theoretical importance of empathy has long been recognized, the origins of these individual differences were largely unknown. In this study, we investigated the effect of working memory capacity (WMC) on individual differences in empathy. A Japanese version of the Reading Span Test (Osaka and Osaka, 1994) was administered to 24 female university students. Participants were then asked to complete the Sakurai's (1988) Japanese version of the Interpersonal Reactivity Index (Davis, 1983), the

Basic Social Skills Inventory (Horike, 1994) and the Social Skills Inventory (Kikuchi, 1995). The IRI scale consisted of four subscales: perspective-taking, fantasy, empathic concern, and personal distress. Also, the SSI scale consisted of three subscales: encoding, decoding and control. The results revealed that the individuals low in WMC had significantly higher perspective-taking scores than the high-WMC participants ($p < .01$). We also found no significant coefficient of correlation between skills and empathy for the low-WMC participants. Turning to the individuals high in WMC, we found a negative coefficient of correlation between reading skill and empathic concern ($r = -.584$), and a negative coefficient of correlation between encoding skill and individual distress ($r = -.796$). These findings suggest that people who are deficient in working memory capacity may have difficulty distinguishing self from others in empathic situations, and that working memory capacity functions as a moderator of the relationship between skills and empathy.

Keywords: *empathy, working memory, skills, distress*